3D

Home & Land Design

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LandDesigner® and Sierra Home Architect®

3D Design Collections

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625 South State Street, Orem, Utah, 84058
(800) DATASET or (800) 229-3000

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LandDesigner 3D Credits

Executive Producer	Barbary Brunner
Director of Engineering	Fred Shean
Senior Producer	Tyler McKenzie
Lead Designer	Leigh Allen
Designer	Chris Arredondo
Associate Designer	Crystal Harwood
Lead Engineer	David Elliott
Brand Manager	Karen Redetzki
Associate Brand Manager	Stacy Heinemann
Production Manager	Jeff McCrory
Production Coordinator	Julie McNay
Database Administrator	Victoria Lanum
Senior Content Assistant	Ruby Bass
Engineering Project Manager	Jason Tsujikawa
Lead Engineer	Mae Sahabu
Lead Engineer	Craig Duncan
Engineer	Aaron Nonis
Engineer	David Rogers
Release Engineer	Andrew Mellors
Art Department Manager	Julie Owen
Project Manager	Sandee Mendrysa
Project Manager	Stacy Walters
3D Artist	David Lee
3D Artist	Matt Brauch
UI Production Artist	John Weaver
UI Production Artist	Jason Jones
Artist	Jodie Henry
Documentation Manager	Michelle Daniels
Technical Writer and On-Line Help Author	Media Publishers
Manual and PDF Layout Designer	Skip Fantry
Director of Quality Assurance	Gary Stevens
Quality Assurance Supervisor	Tom Bradshaw
Lead Quality Assurance Analyst	Heather Downing
Quality Assurance Analyst	Jensine Ericksen
Quality Assurance Analyst	Larry Hansen
Quality Assurance Analyst	Sean Day
Quality Assurance Analyst	Jason Furler
Quality Assurance Analyst	Mark O'Reilly
Tutorial Video Editor	Tonya Stumphauzer

Contributors:

Katie Haugse, Annee Hall, Brett Hall, Eric Raymond, Lisa Van Stone, Stacy Pairish, Care Michaud-Wideman, Yung Kao, David S. Lee Swenson, Dan King, Dominic Angelini, Scott Petoff, Anne Tourney, Cesar Rodgers, Rachael Smolen, Terra Wahl, Thann Vernon, Cathy Weselby, Patrick Chabaneix, Jim Cheung, Lourdes Luy, Jessica Teeter, Victor Vong, Kyra Greene, Erin Hickman, Ed Hermann, Christopher Cianciarulo, Christopher Petersen, Elena Nikolskaia, Sharon Lima, Keith McNeil, Andrea Hubbard-Nelson, Kris Montgomery, Kristi Hein, SuZ Levitz, Wendy Lin, Lynne Piade

Dave Menninger, Renée Sando Ornes, Jim Rosenau, Jaymi Bauer, Laural LaFayette, Kate Powell, Matt Eslick, Erik Johnson, Dave Lee, The Software Resource Inc., Rebecca Torcyzner, Karen Thomas, Diana Scott, David Cockerill, Mike Sanderson, Greg Armanini, Kristen Montgomery, Matthew Self, Ethan Ham, John Rieger, Walter Hsaio, Steven Brusewitz, Prof. Michael C. Bucher, Mark Burns, David Chang, Roger Fiske, Erik Gilbert, Janet Goldenberg, Catherine de Heer, Dianne Jacob, Kathleen Jones, Mark Kane, Mark Lazen, Abhimanyu Katyal, Margaret Leighly, Amy Phillips, Sheela Ramaprian, Ben Rosenbaum, Heidi Schulman, Connie Tamaddon, Peter Whiteley, Bryon McPherson, Lawrence Lee, Lindy Rowe, Cannit Splain, James Schutte, Ernie Wasson, Paula Blanchfield, Anu Shankar, Gladys Chan, A.S.L.A.

Photographers

Cover garden design by Elizabeth Lair
Janet Loughrey, Michael Thompson, Uniphoto/Pictor, Jack Fleming
ImagiGraphics, Inc., 1256 Burlington
Hickory Corners, MI 49060, (616)345-1175

Terra Wahl
David Cavagnaro
Scott Sherman
Jerry Pavia
Lawrence Lee
Ernie Wasson

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Home Architect Credits

Barbary Brunner, Executive Producer
Tyler McKenzie, Senior Producer
Emily Allen, Associate Producer
Leigh Allen, Design Manager
Chris Arredondo, Designer
Fred Shean, Director of Engineering
David Elliot, Engineer
Karen Redetzki, Brand Manager
Kerrie Foss, Associate Brand Manager
Stacy Heinemann, Associate Brand Manager

Darla Hussey, Production Manager
Chris Phillips, Production Coordinator
Caroline Vollmer, Production Coordinator
Content Assistants: Julie McNay, Stacia Wert, Ruby Bass, Jeff McCrory

Jason Tsujikawa, Engineering Project Manager
Mae Sahabu, Lead Engineer
Engineers: John Cullison, Sergey Bogdanov, Brian Albea, Aaron Nonis, Leslie Pere, David Rogers
Mark Hammingh, Database Administrator
Vicki Lanum, Database Administrator
Alan Sebring, Install Engineer Manager
Andrew Mellors, Install Engineer

Tina Dickey, Art Production Manager
Matt Brauch, Senior Artist and 3D Artist
John Weaver, Artist
Jason Jones, UI Artist

Michelle Daniels, Documentation Manager
Elizabeth Bailey, Technical Writer
Skip Fantry, Manual Layout

Tom Bradshaw, Quality Assurance Manager
Heather Downing, Test Lead
Jess Roberts, Test Lead
Testers: Jensine Ericksen, Sue Ung, Brian Wolfe, Jason Furler

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Introduction

to LandDesigner 3D

This manual can be used with the following programs: LandDesigner 3D, Custom LandDesigner, and Complete LandDesigner; Sierra Home Architect, Custom Home, and Complete Home. Not all LandDesigner and Home programs are explained in this manual. For information about LandDesigner and Home products not covered in this manual, see the online help system for each program.

LandDesigner 3D™ is a suite of programs from SierraHome that helps you with the design of landscapes, decks, and gardens. The number of programs varies with the LandDesigner 3D package you purchased

System Requirements

To run LandDesigner effectively, your system needs to meet the following hardware and software requirements:

- An IBM™ PC or compatible PC with at least a Pentium 166 processor. For better results, we recommend a Pentium 233 processor or higher. The faster your processor, the faster the programs will run, especially in 3D View.
- Microsoft Windows™ 95/98/NT/Windows 2000/Windows ME.
- At least 32 MB of RAM (64 MB is recommended.)
- At least 60 MB hard drive space is required for a basic installation. Allow up to 125 MB for a Complete LandDesigner 3D installation.
- An SVGA color monitor with a graphics card capable of showing 16-bit color or higher. For better results, we recommend a Direct3D/DirectX-compatible accelerator card. The program is designed to work at a screen resolution of 800 x 600 or higher.
- 8X CD-ROM drive (16X drive recommended).
- Windows-compatible sound card. LandDesigner programs include music, narration, and sound effects which require a sound card to hear. For the best sound, we recommend at least a 16-bit stereo sound card.

Installation

LandDesigner consists of six products. You can install each program separately or install all six. The installation procedure is the same for each program.

1. **Close any open applications on your computer.**
2. **Insert LandDesigner CD #1 or #2 into the CD drive.**

The first installation screen appears. If it doesn't appear, try reinserting the CD, or in the Start Menu choose Run, and type "d:\Autorun.exe," replacing "d" with the drive letter for your CD.

3. **Click the Install button next to the name of the program to install.**
4. **Follow the instructions on your screen to complete the installation of the product. Click Next to move through the installation screens.**
   - By default, the program is installed in a subdirectory within the C:\SIERRA directory. To install the program elsewhere, click the Browse button and assign a new path.
   - Fill out the personal information forms to become a registered user of Sierra LandDesigner.
5. **When the Setup Complete window appears, click Finish.**

   To start the program you installed:

   - Click the Run button next to the name of the program in the Installation window.

     Or,

     Click the Start button on the Windows task bar. From the resulting menu, click Programs, then select Sierra. From the final menu, select the name of the program.

Uninstalling Programs

To remove a LandDesigner product from your hard drive, use one of the following procedures:

To uninstall using the application CD:

- Insert the LandDesigner CD#1 into the CD drive. When the LandDesigner screen appears, click the Uninstall button beside the program to remove. Follow the instructions that appear on your monitor to uninstall the program.

To uninstall using a desktop option:

- Click the Start button on the Windows taskbar, point to Programs, point to Sierra, point to the product name, and click the Uninstall option for the product. Follow the instructions that appear on your monitor to uninstall the program.

Note: If you installed Garden Planner, you probably chose to add the Garden Planner icon to the Windows taskbar. To uninstall Garden Planner you must first exit the tray application. To do this, right click on the tray icon and choose Exit from the resulting menu.

1 Getting Started

in LandDesigner 3D

Features of LandDesigner 3D

- The HouseWizard™ makes short work of laying out your house footprint. Use this wizard to guide you through representing the house in your landscape design.
- The SlopeWizard™ is an easy way to show grade changes.
- The Plant Search function helps you find plants, using a variety of search criteria, that will work in your own garden.
- The Design Review informs you of possible design flaws resulting from problems with irrigation, wall measurement, tree locations and much more.
- Realistic 3D views and the Walkthrough feature let you see your landscape in detail from any angle.
- The high resolution photo raytracing feature produces high quality photorealistic images.
- Hundreds of 3D models show you how plants and other objects look in your design. Position landscaping elements and accessories until you like the results.
- The Shopping List tracks many landscape costs automatically.
- Take snapshots of your designs and record walk-through movies which let you communicate your ideas with contractors and designers.
- Use the Virtual Tour function to share your designs over the Internet with other LandDesigner 3D users.

The First Screen

The following screen appears when you start LandDesigner 3D:

Welcome screen of LandDesigner 3D

The Welcome screen gives you four choices to begin:

- **Start a New Design.** Select this option to begin a design from scratch.
- **Open the Designer Gardens Library.** Choose from a list of gardens and landscapes designed by experts. This is a great starting point for ideas and inspiration.
- **Open a Saved Design.** Return to a design you worked on in the past.
- **Open Most Recent.** Return to your last garden design. This is not usable if you are running LandDesigner 3D for the first time.

Tutorials

LandDesigner 3D includes a series of tutorials that appear on each screen in the left-hand Guide tab. These tutorials demonstrate how to use many of the features of LandDesigner 3D. If you are a new user (and if you have a sound card), we recommend that you watch the Tutorials as you create your own designs. To play a tutorial at any time, click on the Tutorial button on the Guide tab at the left side of the window. A tutorial related to the task you are working on will play.

The first tutorial, under the Start tab, gives you an overview of LandDesigner 3D. If you've just started LandDesigner 3D, click the Start a New Design button. When the Welcome window opens, click the Tutorial button on the Guide tab.

Using the Step-By-Step Toolbar

To help you proceed through the design phases, LandDesigner 3D has a Step-by-step toolbar.

Step-by-step toolbar

This toolbar is at the top of the screen and contains four main phases: Start, Site, Design and Finish. When you click on a phase, the toolbar changes to display the steps within that phase.

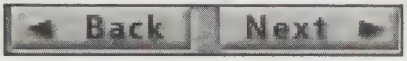
To move between the sections in each phase, click the Next or Back buttons just under the Step-by-step toolbar.

As you move through the Step-by-step toolbar, you can click the Guide tab at the left side of the window to get more information about the selected step. To play an audio-visual tutorial for the selected step, click the Tutorial button on the Guide tab.

The Step-by-step toolbar contains the following steps:

- **Start.** This phase welcomes you to LandDesigner 3D by offering an overview tutorial. To view the tutorial, click the Welcome button just under the Start tab. When you are ready to move on, click the Interview button under the Start tab. LandDesigner 3D guides you through an interview that helps the program customize plants and materials to your locale. See Chapter 3 for more information about this interview.
- **Site.** This phase helps you lay out your yard (including the lot), your house, the slope of your lot, and roads and driveways. You can also insert symbols that indicate problem areas and points of interest. For more details on laying out your site, see Chapter 3.
- **Design.** This phase helps you through the main part of your design work. Add hardscapes, structures, plants, beds, and irrigation. You can also use the Dynamic F/X (effects) to see how shadows affect your plan and how your plants will grow over time.
- **Finish.** In this phase, you can print your design and view the list of materials in it.

Note: Experienced users can skip the Start phase and go straight to the Site phase in the Step-by-step toolbar. If you select New from the File menu, you begin at the Site phase.



Note: To skip to the next step in the toolbar, click the Next button.

Resources

LandDesigner 3D allows you to access a variety of useful resources for gardeners. Click Resources on the Features menu to see recommended books, magazines, organizations and web sites.

Web sites include:

- SierraHome's gardening.com web site, where you can get expert answers to your gardening questions and access a wealth of online resources.
- The Ortho Online web site, where you can find answers to your gardening problems.

Quick Start Tutorial

The following tutorial introduces you to the basic features of LandDesigner 3D. In five simple steps, you will learn to:

- Customize LandDesigner 3D for your area
- Design your site
- Add hardscape, structures, and plants
- Look at your design in 3D

If you need additional help during this Quick Start tutorial, read the Guide text on the left side of the screen to help you along.

Note: In order for this Quick Start tutorial to be most helpful, you should start this tutorial from the beginning and work to the end. Not following these steps in succession can result in choices other than the ones to which this tutorial directs. Once you are comfortable with LandDesigner 3D, you can perform the design steps in the order you like.

Step 1: How Does Your Garden Grow?

Every gardener knows that what grows well in one place may not even take root in another. On the Start tab, click the Interview button and answer the questions about the conditions where you live. This helps LandDesigner 3D offer choices specific to your conditions. Click the Next button to step through the two screens of interview questions. When you have answered all the questions, click the Done button.

Step 2: Lay Out Your Site

This step shows you how to design a lot. For this tutorial, we will be designing the landscape for a 100' x 100' lot. After entering the lot size, continue through the steps by clicking the Next button. When the "Done" button appears, click it to continue to the House Wizard.

Click "Use a finished sample home" and choose "Small L-Shaped Traditional" from the screen that appears and click OK. The house now appears in the middle of the lot. Move it to a location near the top. To rotate the house, select it by clicking it and then drag the rotation handle around. The rotation handle is the small black circle near the house. To move to the next step, click "Done".

Next, define the slope for the lot. In this Quick Start tutorial, we'll just leave the lot level. Click Next to move on to the Fine Detail step. In this step, you can define mounds and holes in your lot. Again, for this tutorial we will leave the lot level. For more details about defining the slope and shape of your lot, see Chapter 3.

In the next step, you can add symbols to your design. These symbols are used to mark the site to indicate notable features – for instance, you may want to indicate that a particular direction is a nice view, or that there are gas lines in a certain place. Drag and drop the symbols you want from the Object toolbar at the bottom onto your plan.

To add roads and driveways, click the Roads/Driveway option on the Site tab. The Object toolbar at the bottom shows the selection buttons for Roads and Driveways. Click the Roads menu to open the popup menu. Select Driveways to display the available driveways in the Object toolbar. Select the first driveway from the Object toolbar. Starting in the upper-left corner, hold down the mouse button and drag the mouse down and to the right to create a driveway next to the house.

Step 3: Add Hardscape and Structures

Click the Design tab to move on to the next section. The Design phase is used to lay out the objects in your garden, including plants, trees, garden furniture, fences, and so on.

Object toolbar showing picket fences

Click the Hardscape button in the Design tab. Notice how the Object toolbar at the bottom changes to display new objects. Using the center options button on the Object toolbar, select Fences, click the right button to select Picket. Select the curved picket fence. Now we will place a fence around the outside edge of the lot, leaving a gap for the driveway.

To draw the fence, you use a drawing tool. To see a selection of the available tools, click the fence you want to use, then click the Draw Type button on the far right of the Object Toolbar. A small menu opens up showing the available tools. Click the "Multi-line" tool that looks like a W. This draws a line from point to point, each time you click your mouse on the lot in Top View. Click on one side of the driveway. Move the mouse to the corner of the lot and click again. Continue this until you have drawn a line around the lot. Press Escape or right-click to end the line.

Now place a gazebo in the right rear corner of the lot. Click the Structures button on the Design tab. The Object Bar changes to show the structures selection buttons. Click the right button to open the popup menu.

From this menu, select Gazebos and then choose the third gazebo on the Object toolbar. Now click once on your lot where you want to place the gazebo and it appears.

Step 4: Adding Plants

There are two kinds of plants in LandDesigner 3D: generic placeholders and specific varieties. On the Design tab, click Plants. Or, at the bottom left of your screen, to the right of the word Search, click the left category button. From the popup menu, click Plants. Select Trees from the popup menu. Select one of the trees.

Click the Plants button on the Design tab. Generic tree shapes should appear in the Object toolbar. Select the third tree from the left. We're going to plant a row of these trees along the left property line, so click the Draw Type button on the end of the Object toolbar and select the Hedge Draw option. Click once at the front of the property where you want the row of trees to start, then at the back of the property where you want the trees to stop. You can change the distance between the trees by double-clicking on one of the trees to open its spec sheet. Type a new spacing in the Spacing box, and then click OK.

Hedge Draw Option

Draw Type Button

Now add a few flowers near the front of the house. Click on the button to the right of the Plants button on the Object toolbar and choose Clusters. Place two or three clusters of plants to fill the "L" of the house.

Complete the design with a lush carpet of lawn grass. Click on Clusters and change it to Lawn Grasses. Select the generic shape. Click once in the upper left corner of the lot, hold down the mouse and drag to the lower right corner. When you release the mouse button the area you just defined will fill with grass.

Step 5: Tour Your Design in 3D

To see what your design looks like in 3D view, click on the 3D tab. The controls for walking around in 3D view are located at the bottom of the screen.

Use the cross-shaped navigational arrows to change your view of the landscape. Adjust your angle by selecting the tilt up or tilt down icons. Adjust viewing height by clicking the helicopter or eye-level view icons, or by clicking the height arrows.

Saving Your Design

When you reach a stopping point in your design, you can save it for later use. It's a good idea to save your design regularly once you know you want to keep it.

To save your design in LandDesigner 3D:

1. **Select Save from the File menu.**
2. **In the Save window that appears, enter a name for your design in the File Name field.**
3. **Optionally, select another drive or folder for the file.**

   Use the navigational controls in the Save window to change folders. See your Windows manuals if you need more information.

   By default, your design files are saved to the C:\Sierra\ Land3D\Designs folder. LandDesigner 3D gives the file a .3dl extension.
4. **Click Save to save the design file.**

Note: If you try to exit LandDesigner 3D without saving your work, you are prompted to save the design.

Exiting LandDesigner 3D

To exit LandDesigner 3D

- Select Exit from the File menu.

  If you have unsaved changes, LandDesigner 3D prompts you to save them.

Using the Tools

in LandDesigner 3D

Working with Sample Landscape and Garden Designs in the Designer Gardens Library

The sample designs are examples of what you can do with LandDesigner 3D. We recommend that you view some sample designs in the Designer Gardens Library before creating your own.

Landscape designs are examples of complete landscapes that typically include a house, trees, shrubs, driveways and other objects. These designs demonstrate how to use LandDesigner 3D to create a complete design for the whole landscape.

Garden designs are examples of garden beds that have been created to suit a particular environment. These designs include a careful selection and arrangement of plants that combine aesthetic and practical qualities. For instance, the Northwest Garden has plants that grow well in shade and rich soil.

If you have saved designs of your own as sample files, they appear under the category My Samples.

You can also use a sample design as a starting point for a landscape garden or design of your own.

To look at a sample design in LandDesigner 3D:

1. **Select Open Designer Gardens from the File menu.**

   The Designer Gardens Library window appears.

2. **Click the plus (+) symbol to display examples for each garden category.**

   If you have created samples, the My Samples tab also appears.

3. **Click to select a listing that interests you.**

   When you select a listing, a small image is shown on the right, and a description on the left. You can move through the selections using the Up and Down arrow keys or the mouse.

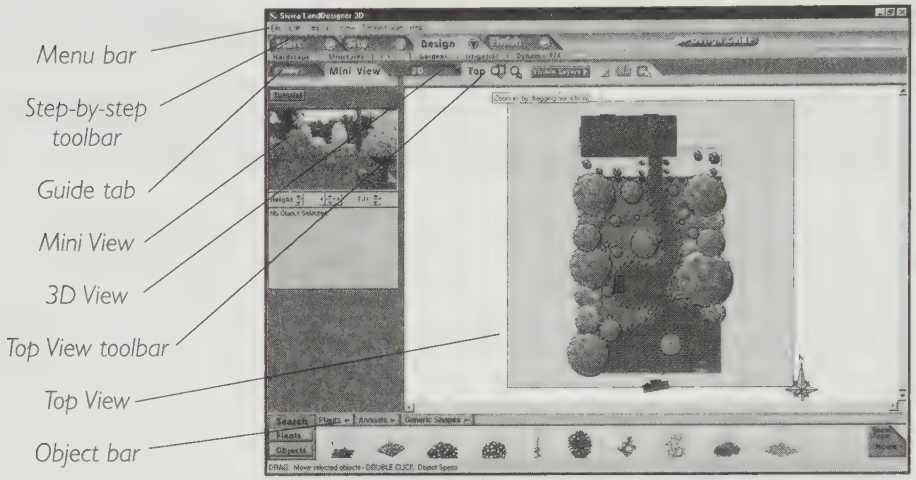
4. **When you have selected the sample you want, click OK.**

   After a short pause, the sample appears in the Designer.

Working in the Designer

When the sample design appears, you're ready to use the Designer. This is the main window in LandDesigner 3D, where you create and visualize your designs in two and three dimensions. Use the Designer to try out changes and improvements in your yard, adding new plants, and adjusting grading, among other things.

The following illustration shows a sample design. As you examine the design you selected in the previous section, we'll show you the tools that help you navigate the Designer.



Designer in LandDesigner 3D

The Designer consists of the following elements:

- **The menu bar** contains most of the commands for using LandDesigner 3D. We describe menu options as needed throughout this manual. Chapter 8 contains a quick reference for all LandDesigner 3D menu options.
- **The Step-by-step toolbar** helps you proceed logically through the design process. See Chapter 3 for details on using this toolbar.
- **Guide tab**. If you need help using any of the design steps in the Step-by-step toolbar, click the Guide tab. For narrated video explanations, click the Tutorial button on the Guide tab.
- **Mini View.** When you click the Mini View tab, this window in the upper left corner shows a smaller version of the inactive view. In other words, if the Top View appears in the Designer, a smaller version of the 3D View appears in the Mini View.

Note: The Mini View is not always available.

- **Top View toolbar.** This toolbar lets you switch between 3D View and Top View, and includes several controls for changing the Top View display. For example, you can magnify your view, view or hide certain objects, add text notes to your design, and measure distances.
- **The Top View** is an aerial, 2D look at your landscape design. Use the Top View to create your design and add plants and other objects. This view appears by default when you open the Designer. Chapters 3, 4, and 5 describe how to develop your design in the Top View.
- **The 3D View** shows the design in three dimensions. To switch to 3D View from Top View, click the 3D tab in the Top View toolbar. Use the Walkthrough feature to stroll around in your design and view it from any angle.

- **Object toolbar.** This toolbar changes depending on whether 3D View or Top View is selected. The options available on the Category buttons also depend on the selected button below the tab on the Step-by-step toolbar. For instance, if you select Garden under the Design tab, the Object toolbar will show a variety of garden beds. See the following sections for more details. In Top View, the Object toolbar is used to select objects. In 3D View, the toolbar is used to move around with the 3D View.

Using the Object Toolbar in Top View

If you click the Top tab in the Top View toolbar, the Object toolbar at the bottom of the screen displays options for working within Top View.

Object toolbar in Top View

These tools let you add plants and other objects to your design.

When you select the 3D View, the Object toolbar displays options for moving around in 3D. The next section explains your options in the 3D View.

Navigating in 3D View

Use the 3D view to see a realistic rendering of your landscape design in three dimensions. The Navigation tools let you move through the design and view it from all angles.

To use the 3D view, click the 3D tab on the Top View toolbar. The 3D View toolbar appears.

Navigation toolbar in 3D View

This section explains how to:

- Navigate in 3D view
- Change your view by moving the camera

Using the Navigation Tools

The Navigation tools allow you to move around in the 3D View. In addition to using the tools shown on the previous page, you can also move around by dragging the mouse inside the 3D View or by using the arrow keys on the keyboard. This section describes all three methods.

Using the 3D View Toolbar

The 3D View toolbar is shown in the previous illustration. It is divided into four sets of tools for navigating the 3D View.

- **View.** Click the two View icons to switch between an overhead view (helicopter icon) or an eye-level view (person icon).
- **Move.** Click a navigation arrow to move in the direction indicated by the arrow. Hold down the mouse button to continue the movement.
- **Height.** To adjust your viewing height, click the up and down arrows.
- **Tilt.** Click the Tilt icons to adjust your viewing angle.

Note: The tools listed above are also available when the 3D View is selected in the Mini View.

You can change the 3D View in the following ways:

- By clicking and dragging the mouse within the view.
- By using the arrow pad shown in the previous illustration.

  For best results, start dragging from the center of the 3D View or arrow pad.
- To move sideways in the 3D View, hold down the Shift key as you drag the mouse.
- To change your viewing height in the 3D View, hold down the Ctrl key as you drag.

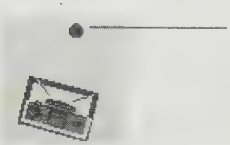
Note: The closer the mouse is to the center of the 3D View or arrow pad, the slower your movement. Dragging the mouse away from the center increases your speed.

Using the Keyboard

Click the four arrow keys on the keyboard to move in small, precise increments in any of the four directions. To use these arrow keys, 3D View must be the active window.

Moving the Camera

Moving the red camera in Top View is often the best way to see what you want in the 3D View. While the tools in the previous section let you change your view gradually and incrementally, you can move your view to any part of the design by repositioning the camera.



Spin handle

To move the camera:

1. **Click the Camera icon in Top View.**

   A box appears around the camera. A spin handle also appears.

2. **Hold down the mouse button and drag the camera to the location you want to see in 3D View.**

   If necessary, use the Zoom tools to see the camera better.

Zoom in *Zoom out*

3. **To zoom in on a particular area of the design, click the Zoom In tool in the Top View toolbar, then drag diagonally in the Designer to define the rectangular area.**

   This area is magnified when you release the mouse button.

   Click the Zoom Out tool to see a larger view of your design.

4. **To rotate the camera, move the mouse over the spin handle dot near the camera icon, click and hold the mouse button then drag to rotate the camera.**

   Click the 3D tab in the Top View toolbar. The new camera position displays the new perspective in the 3D View.

Using Layers

The Visible Layers control in Top View lets you show or hide various aspects of your landscape design. You might want to turn off the display of some items if your computer is running slowly or your design becomes congested. Turning off the foliage layer has the greatest effect on speed of processing.

To use the Visible Layers option:

1. **If necessary, move to Top View by clicking the Top tab in the Top View toolbar.**
2. **Click the Visible Layers button in the Top View toolbar.**

   The list shown in step 3 appears. If a layer has a check mark next to it, it appears in your design. Each item in the list is a toggle, meaning that you turn it on or off each time you select it.

3. **Turn the display of the following items on or off:**
   - **Foliage.** When selected, plants are shown with full foliage. If you turn this option off, plants appear as circles. Turn the Foliage display off if your computer is running slowly or if your design appears cluttered.
   - **Slope Detail.** When selected, the ground displays any mounds or holes you applied. If you turn this option off, the slopes disappear.
   - **Utilities and Symbols.** When selected, the locations of all utilities such as electric and water lines are shown in Top View. If you turn this option off, the utilities disappear.
   - **Sprinkler Coverage.** When selected, sprinklers appear with their coverage areas. If you turn this option off in Top View, the sprinklers remain but the coverage areas disappear. Sprinkler coverage areas can appear as circles or pie shapes.
   - **Plant Labels.** By default, LandDesigner 3D assigns labels to most plants placed in your design. When the Plant Labels option is selected, these labels appear with their items in Top View. If you turn this option off, the labels disappear. The Plant Labels option is off by default. You can change the font, type size, and background for your labels, and you can display full plant names, plant types, or plant notes.
   - **Your Notes.** When selected, any notes you added to Top View are shown with the design. If you turn this option off, your notes will not be displayed.

Changing Label Appearance

You can change the appearance of the labels in your design. The Plant Labels option lets you show the full name, plant type (shrub or annual, for example), or notes for each of your plants. In addition, you can select the font, type size, and effects for your plant labels and notes.

To change label appearance:

1. From the Edit menu, click Options, and then click the View tab. Click Plant Labels. Or, right-click on your design (but not on an object in the design) while in Top View, and then click Plant Labels.
2. Select a label type to display and customize.
3. Select a font, style, and type size for the label.
4. Select a color for the label background.
5. To create a border around the outer edge of the label, select Draw Border.
6. Click OK to save the new settings.

   The selected label type appears next to the plants in your design with the new settings. (If the label does not appear, click the Visible Layers button, and then select Plant Labels.)

Using the Step-By-Step Toolbar

Step-by-step toolbar

The toolbar is at the top of the screen and contains four main tabs, representing design phases. When you click on a tab, the toolbar changes to display actions within and provide tools for that design phase. The appearance and contents of the Object toolbar depend on which button is selected on the Step-by-step toolbar.

Note: The Step-by-step toolbar is a guide to using LandDesigner 3D. It is not mandatory that you use its steps in order, or at all.

As you click through each phase, you might find activities that don't interest you. If so, you can skip them. To skip ahead within a selected phase, simply click on the next topic listed for that phase under the tab.

To move ahead while in a step-by-step phase, click the Next button to move on to the next step.

If you need help with any of the steps in the Step-by-step toolbar, click the Guide tab at the left side of the window for more information. For a narrated explanation, click the Tutorial button in the Guide tab.

The toolbar consists of the following design phases:

- **Start.** Use to start the overview tutorial and specify general conditions for your area.
- **Site.** Use to lay out your landscape site, including the lot, house, slope, roads, and driveways.
- **Design.** Use to add and position plants, structures, and other objects in your design.
- **Finish.** Use to print your design and view your Shopping List.

Experienced users can skip the Start phase and go straight to the Site phase in the Step-by-step toolbar. You can change Category buttons in the Object toolbar at any time to select plants and objects, and then drag them into Top view to add them into your design.

Tips for Using the Toolbar

Steps within the Step-by-step toolbar typically take one of two forms.

- A wizard is a series of windows that guides you through a process and helps you make the necessary selections to perform the task. To move to the next window of a wizard, click Next. To move to the previous window of a wizard, click Back.
- In some steps you add plants and objects from the Object toolbar. In these cases, the Object toolbar changes to display appropriate items for the selected step. For example, the Plants category appears when you click Plants on the Design tab of the Step-by-step toolbar. You can then drag these plants from the Object toolbar into your design. You can also change the Category buttons yourself (in non-wizard steps) to display other items.

Starting Your Design

LandDesigner 3D includes a Design Guide that has many helpful hints about how to start projects. To open the Design Guide, select Design Guide from the menu bar, and then select a Design Guide option.

When you are ready to begin your design, select the Start phase in the Step-by-step toolbar. There are two sections in the Start phase:

- **Welcome.** When you click the Welcome button or start LandDesigner 3D for the first time, the Welcome screen appears. The Welcome screen presents an overview video to help you use LandDesigner 3D.
- **Interview.** When you click Interview, LandDesigner 3D asks several questions about your gardening conditions and objectives. Your answers help LandDesigner 3D customize the program according to your needs.

  Question 1 in the interview lets you specify your hardiness zone. USDA hardiness zones subdivide the U.S. according to minimum temperatures at which plants can survive. If you don't know your zone number, click Map, and then click your zone in the map.

  When you finish the first set of questions, click Next to see the second set. When you've completed all selections, click Done.

Defining the Site

To define the site in your landscape design, select the Site phase in the Step-by-step toolbar. The Site phase consists of five options:

- **Lot.** Defines the dimensions, property lines, and compass setting for your lot.
- **House.** Opens the house wizard, which takes you through the steps of representing your house in the design.
- **Slope.** This wizard helps you define the slope of your lot and add mounds and holes.

- **Symbols.** Insert the symbols that indicate problem areas and points of interest on your lot, such as wind direction, wet areas, and gas and power lines.
- **Roads/Driveway.** Define roads and driveways on your lot.

The following sections describe each step in defining the site.

Defining the Lot

When you click the Lot button in the Site phase, the lot wizard takes you through the following three steps to define your lot. Click Next to move through the wizard screens.

- **Setting the lot's dimensions.** Define the width and depth of the scene in the appropriate fields. To specify a background and ground cover for the design, click either the Change 3D Ground button or Change 3D Backdrop button. For more details, see Changing Backgrounds and Ground Covers in Chapter 6.
- **Laying down the property lines.** Drag one of the property line tools from the Object toolbar into the design and define a custom shape for your property lines. For details on defining your own objects and shaping them in LandDesigner 3D, see Chapter 4.
- **Setting the compass.** Rotate the compass to point north and properly situate your design. To rotate the compass, click on it in the Designer. The dot that appears with the compass is the spin handle. Hold the mouse pointer over the dot, then click and drag to rotate the compass.

If you need more information about using any of these steps, click the Guide tab at the left side of the window. For a narrated explanation, click the Tutorial button in the Guide tab.

Defining Your House

The house wizard helps you quickly build a facsimile of your home in the landscape design. To begin, click the House button in the Site phase to see Step 1 of the house wizard.

The house wizard has seven steps. After each step, click Next to move through the wizard.

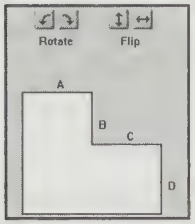
To create a representation of your house in the design:

1. **Select a template to define the basic shape of your house.**

You can click one of the displayed templates, create a custom shape, or click the Use a Finished Sample Home button and select a finished home from the resulting list. If you select a custom shape or a finished home, skip to step 4. You can then add more house blocks to your design.

2. **Determine the size and orientation of the house.**

   Each side of the house is identified with a letter. To change the length of a side, type a new length in the field of the corresponding letter. Press Enter or click in a different side's length textbox to set your update. To rotate the house shape or flip it horizontally or vertically, click the Rotate or Flip buttons.



3. **Follow these steps to define roofing and siding options:**
   - Select Gable, Hip, or Flat as the roof type.
   - Drag the Roof Slope Slider bar to determine the slope of the roof.
   - Click Yes if you want the roof to have an overhang.
   - Set the number of stories for your house.
   - Click one of the three Material buttons to determine the texture of the exterior walls, roof, and trim. The Material Picker window opens. If you need help using this window, see Adding Colors and Textures in Chapter 4.

4. **Add more blocks, if necessary, to complete the basic structure of your house.**

   For example, you can add a garage to the house. Drag these blocks from the Object toolbar into the design, then resize the blocks by dragging the arrows around them. To rotate a block, click it to select it, then click and drag the spin handle that appears below it.

   The Spec Sheet can help you revise your home design. To open the Spec Sheet, double-click a house block in Top View. You can also select a block, click the Mini View tab, and make changes in the miniature Spec Sheet that appears.
   - To change the height of the walls in a block, change the setting in the Wall Height field of the Spec Sheet.
   - To raise a block, change the setting in the Height Above Ground field of the Spec Sheet.
   - The wall and roof settings in the Spec Sheet correspond to your selections in the previous step of the house wizard. You can change these settings if necessary.

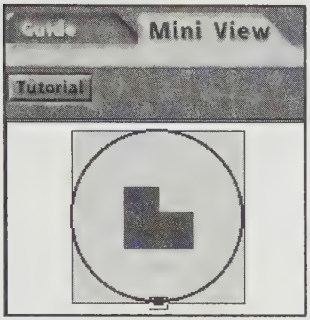
   See Chapter 4 for details on using the Spec Sheet.

   When you finish adding blocks, preview your home design in 3D by clicking the Mini View tab. If necessary, revise the house until you are satisfied with the basic shape.

5. **Add windows and doors to the house.**

   First, click the Mini View tab to display a tracking tool that helps you navigate around the house and find the spots where you want to add windows and doors.

   Click and drag the camera in the viewer to rotate your view, or click a spot on the curve where you want the camera to move. Your vantage point changes in 3D View.



   To change the viewing height of the 3D scene, you can use the 3D Height box near the top of the screen.

   Drag doors and windows from the Object toolbar onto a wall of the house. Click the menu in the Object toolbar to change your selection from doors to windows.

Note: This is the only place in LandDesigner 3D where you can directly place or move objects in 3D View. You might have to wait occasionally while the 3D scene redraws.

   In the Designer, you can drag the windows and doors to new locations on the house. To resize doors and windows, double-click them in the design, then change the Width, Depth, and Height settings of the Spec Sheet that appears. You can also use the miniature Spec Sheet in the Mini View tab.

   To delete a door or window from the house design, select the item and press the Delete key on your keyboard.

6. **Add exterior details such as dormers and a chimney.**

   Drag exterior details from the Object toolbar onto the house. Click the menu in the Object toolbar to change your selection of exterior details. You can resize exterior details in the Designer by selecting them and then dragging the arrows around them. To rotate, click to select, then drag the spin handle that appears.

   To delete exterior details from the house design, select the item and press the Delete key. To copy selected items, use the Copy and Paste commands in the Edit menu.

   You can also use the Spec Sheet to alter these exterior details, as described in the previous steps. For example, use the Height Above Ground setting to change the elevation of dormers and chimneys.

7. **Finish the house by positioning it on the lot.**

   To reposition the house, click and drag it in the Designer.

To revise the house, you can click Back to return to previous steps in the house wizard. Click Done when you are finished. You can also revise the house at any time by double-clicking it in the Designer and changing the settings in the house wizard.

Defining the Slope of Your Lot

The slope wizard enables you to create slopes and grades on your lot.

To define the slope of your lot:

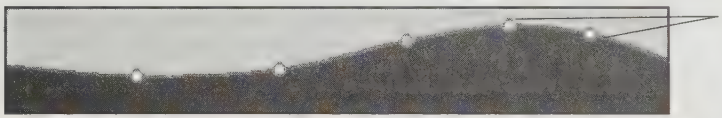
1. **Click the Slope button in the Site phase to see Step 1 of the slope wizard, and then define the basic slope of the lot.**

   Set the maximum ground height of the grade at the top of the slope. If your lot has one predominant slope, click the up and down arrows on the appropriate side(s) of the lot to mimic the slope. Use the text boxes to specify the height of any side of the slope.

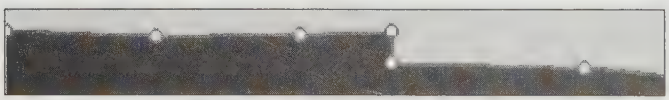
2. **If your lot is terraced or has a number of rolling slopes, click the Advanced button.**

   Advanced slopes are optional. You can skip this step if you want. Use Advanced slopes to define a curvature or terraced effect across one plane of your lot. These curvatures or terraces add to the general slope defined in the first step.

   Each time you click on the shape, LandDesigner 3D adds a point. You can drag these points to change the elevation and define the slope. To delete a point, click and drag it over another point. Use the measurement guides that appear when dragging points to help you judge the position of the curve.



Defining a rolling slope



Defining a terraced effect

In addition to defining the profile of the slope, you also need to define which direction it runs through the lot. To choose which direction the curve runs through your lot, click either the left or bottom option buttons that appear just to the left of and below the green slope in the window.

If you click the bottom option button, the profile you have defined will run West to East—as if you are looking at it from the South. If you click the left option button, the profile will run from North to South as if you are looking at it from the West.

3. **Add hills and valleys: Click Next to go to the final step of the slope wizard. Here you can add holes and mounds to your design from the Object toolbar.**

To add a mound or hole, select the shape from the Object toolbar that closely matches what you need to add to your design. Drag it on to Top view.

Once the mound or hole is added to the Designer, you can move and reshape it by dragging the triangle and diamond markers. You can also rotate the hole using the dot marker.

If you want to reshape the hole or mound using measured dimensions, double-click on it to open the Spec Sheet. Use the Spec Sheet to type new dimensions for the mound or hole.

If none of the choices on the Object toolbar match your needs, you can draw your own hole or mound shape using the Draw Type tools. For more information on these tools, see Drawing Your Own Object Shapes in Chapter 4.

Using Symbols to Mark Points of Interest

Click the Symbols button in the Site phase to insert markers that indicate potential problem areas and points of interest on your site, such as wind direction, noise problems, and eyesores you want to hide. If you are not sure what an icon is for, hold your mouse over it for a moment; a brief description appears. Drag these symbols from the Object toolbar and drop them in the proper place on your site.

Adding Text Notes

You can add comments to your design by typing text notes. Notes can be useful for explaining features of the design to contractors or simply to provide a reminder to yourself. For instance, you may place a note next to a plant that needs special soil preparation so that when you plant it you don't forget.

When you add a note, a line is automatically included; the line points to the plant or other subject for the note. First, you'll select the end point for the note line; then, you'll select the note's text location.

To add a note:

1. **Click the Add Text button in the Top View toolbar.**
2. **In the design, click the "pointer" end of the note line.**
3. **Click the opposite end of the note line.**

   The note line is drawn from the "pointer" end to the base of the note line. A text box with the word "Notes" appears at the base. You can change the note's text and appearance.

To change note text and appearance:

1. Double-click the note's text label. Or, right-click a label, and then click Specs.
2. Type new note text.
3. Select a font, style, and type size for the note text.
4. In the Effects box, select strikeout, underline, or color effects for note text.
5. Select Show Arrowhead to show the note's "pointer" line.
6. Select Draw Border to place a line around the edge of the label.
7. Select a background color for the label.
8 Click OK to save note settings.

Note: Symbols and notes do not appear in 3D View.

Defining Roads and Driveways

Click the Roads/Driveway button in the Site phase to define drives, patios, and other paved surfaces in your design. Drag items from the Object toolbar and drop them in the design. Paved surfaces are represented in your design as textures on the ground. In the design, you can resize and reshape these surfaces as needed.

When resizing objects, hold down the Shift key to maintain the current proportions. For details, see Drawing Your Own Object Shapes in Chapter 4.

After you finish defining the site, you're ready for the most crucial part of your design: adding exterior objects such as decks and arbors and a variety of plants.

Design phase of Step-by-step toolbar

The Design phase contains six steps:

- **Hardscape.** This refers to built components of your yard and landscape, such as fences and walkway paths. For more information, please see Drawing Your Own Object Shapes in Chapter 4.
- **Structures.** You can add other objects besides plants to your landscape designs, such as a greenhouse, porch, or trellis. For more information, see Finding Objects in Chapter 4.
- **Plants and Gardens.** You can add a variety of plants to your designs. For more information, see Chapter 5.
- **Irrigation.** Use this wizard to plan an irrigation system for your design. You can lay out in-ground sprinklers or surface drip tubing by dragging their components into the design from the Object toolbar. For more information, see Chapter 6.
- **Dynamic F/X (Effects).** Once you've defined the plants, structures, and other objects in your design, you can use the Shadow Caster to see how shadows fall across your design in Top View. You can also project the plants' Growth Over Time™ and use the Seasonal Change™ feature to see how the plants will look in different seasons.

4 Adding Objects

in LandDesigner 3D

Finding Objects

Finding Objects in the Object Toolbar

Adding objects in LandDesigner 3D requires just a few mouse clicks.

Object toolbar in Top View

To find objects using the Object toolbar:

1. **If you are not already in the Top View, click on the Top tab.**

   You must be in Top View to add objects in the Designer.

2. **In the Object toolbar, click the first Category button and select the type of object you want to add.** Accents ►

   For example, you can click the button and select Accents from the resulting list. The related accent items appear in the Object toolbar.

   To see more objects, stay in the Accents menu or switch to a different category.

   - To stay within the Accents category and view different objects, click the next category button. A menu appears, and you can make a new selection. Not all categories have a second Category button.
   - To switch to a different category, click the first category button again and make a different selection, such as Furniture or Structures. Note that the buttons are hierarchical, meaning that your choice in a button determines the options that appear in the next buttons.

   A brief description of the object appears when you hold your mouse pointer over it in the toolbar.

3. **When you find the item you want for your design, click its icon in the Object toolbar and drag it into Top View.**

   You can also place the object in Top View by clicking once on the object and then clicking once inside Top View where you want the object.

Note: Objects you shape yourself behave differently. For details, see Drawing Your Own Object Shapes later in this chapter.

4. **When the object is in Top View, position it properly.**

   For details, see Positioning Objects.

Searching for Objects

LandDesigner 3D also lets you search for objects you can't find immediately in the Object toolbar.

To search for an object:

1. **Click the Objects button under Search in the Object toolbar.**

   The Object Search Engine window appears.

2. **In the Search Terms text box, type one or more words that describe the object.**

   For example, type hammock or bench. You can also type part of a word, such as "sprink" to find sprinkler objects.

3. **Use the Advanced Options section to narrow the scope of the search.**

   When you select one of the Advanced Options attributes, only objects that have that property and match your search words will be found.

Note: Use the Advanced Options with care. If you specify impossible combinations, no matches will appear.

4. **Click Search Now to search for matches. The matches are listed in the center box.**
5. **Scroll through the list of objects. Place a check in the check box next to any objects that you would like to add to the Designer toolbar.**

   (Click an item to view it in the preview window.)

6. **When you have selected the items you want to add, click the Add button.**

   The selected objects are added to the Object toolbar, and may be dragged onto Designer screens.

Note: The Your Object Bar menu retains the items found in all searches. If the menu becomes too congested, you can delete individual items or clear the entire toolbar. To delete an item, right-click the item and select Remove This Object. To clear the toolbar, right-click any item, and then select Clear Your Object Bar. Or, select Clear Your Object Bar from the Edit menu.

Positioning Objects

Use the Top View to reposition and resize objects. You use the 3D View to see the effects of your work. Any changes you make in Top View will also appear in 3D View.

Elevation of Dropped Objects

Each object you drop into Top View is assigned a logical elevation, or height above ground. LandDesigner 3D places most objects on the ground, but there are exceptions. For example, an informal place setting drops on a picnic table with benches. You have to place such objects on top of an existing object when you drop the new object into Top view.

If necessary, you can revise an object's elevation. For example, you can change the elevation of objects on a slope. For details, see Positioning Decorations and Smaller Objects later in this section.

Moving Objects with the Mouse

To move an object to a new location in Top View, click it with the mouse pointer. When the "Move" handle appears, click and drag the object where you want it.

If necessary, use the Zoom tools to see the object better.

Zoom in

Zoom out

To zoom in on the area that includes the object, click the Zoom In tool in the Top View toolbar, then click and drag in the Designer to define the rectangular area. The area is magnified when you release the mouse button.

Moving Multiple Objects

To move multiple objects at one time, you have two options:

- Click the Drag Select button, located on the right side of the top, and then click and drag in Top View over the items you want to move. After you define all the items, release the mouse. Next, click and drag the mouse on one of the objects you selected. All the selected objects are moved.

- Hold down the Shift key and click on each object you want to move. When all the objects are selected, release the Shift key. Next, click and drag the mouse on one object. All the selected objects are moved.

Moving Objects with the Keyboard

By pressing the arrow keys on your keyboard, you can incrementally move a selected object up, down, left, or right.

Positioning Decorations and Smaller Objects

Once you add the main objects in your design, you can add decorative elements such as flower pots and outdoor lighting.

As a rule, don't add decorations until after the major objects are in place and the right size. This will allow you to experiment freely without having to reposition every small object.

Decorative items are available from the Object toolbar, just like larger objects. When positioning smaller objects, you use many of the same tools as for larger ones.

If necessary, use the Zoom tools to see smaller objects better.

Zoom in

Zoom out

To zoom in on the area that includes the object, click the Zoom In tool in the Top View toolbar, then click and drag in the Designer to define the rectangular area. The area is magnified when you release the mouse button.

Selecting Smaller Objects Under Larger Objects

To select smaller objects when they are positioned below larger ones, follow these steps.

1. Right-click on the larger object. A menu opens.
2. Choose Select Object from the menu.
3. Select the smaller object's name from the pop-up menu.

If an object does not appear on the object list, use the following procedure.

1. Zoom in on the area where the objects are located.
2. Temporarily move the larger object aside.
3. Select the smaller object.
4. Click Mini View, and then click the Details button.

Placing Smaller Items On Larger Objects

You may notice that if you position a smaller item in Top View on a larger object, the smaller item "falls" onto the object below. LandDesigner 3D uses this logic to piace table settings on an outdoor table or items on a deck.

However, if you then change the height of the table or deck, the height of the smaller items will not change. Your place settings, for example, might be sliced by the table. To fix this problem, change the Height Above Ground value of the smaller item. The Height Above Ground represents the bottom of the object.

To change an item's Height Above Ground:

1. Open the item's Spec Sheet by double-clicking on the object while in Top view.
2. Enter a new Height Above Ground value so the bottom of the object rests on top of the larger object.

3. **Click OK to close the Spec Sheet and see the results in the 3D window.**

   You might have to experiment with the Height Above Ground setting until the smaller item appears to rest on the larger one.

Using an Object's Spec Sheet

Like the plant Spec Sheets described in Chapter 5, object Spec Sheets give you many options for revising an object's size, appearance, and other properties.

Note: If you click the Mini View tab, a partial version of the Spec Sheet appears in the Mini View on the left side of the window. You can see the selected object's name and revise the object's width, height, and depth. To open the full Spec Sheet from this partial version, click the Details button.

1. **To open an object's Spec Sheet, double-click the object.**

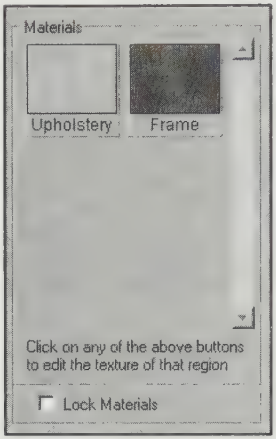
   Or, click the object to select it, and then right-click the object.

   You can also right-click the object and then select Specs from the menu that appears.
2. **Set the object's dimensions by entering values in the Width, Depth, and Height fields.**
3. **To return the object to its original dimensions, click the Original Size button.**
4. **If you are satisfied with the size and location of an object, you can lock its settings to make sure they aren't changed accidentally.**
   - To lock the object's size, click the Lock Size box.
   - To lock the object's size and location, click the Lock Size & Location box.
5. **Click OK to close the Spec Sheet.**

Adding Colors and Textures

Spec Sheets can help you resize and replace objects or lock their position and size. The Spec Sheet also lets you assign distinctive colors, textures, and styles to many objects in your design.

You can change these materials at any time in the design process. If you move objects after applying materials, the materials move with the objects.



Materials section of object Spec Sheet

To add materials to objects in the Designer:

1. **Double-click in Top View on the object whose style you want to edit.**

   The object's Spec Sheet opens. The Materials section displays panels for each style assigned to different parts of the object. For example, a fountain might have a panel for its spout, the pool and the water.

2. **To copy material shown in one panel of the Spec Sheet to another panel, click the first panel, drag the mouse to the panel you want to change, and release the mouse button.**

3. **To change a material, click a panel.**

   The Material Picker window opens for the selected style.

4. **Use the following options in the Material Picker window to find the style you want:**

   To view different material types, click one of the category buttons on the left side of the window.

   When you've selected the category you want, scroll through the displayed panels to look at your choices. Place the mouse pointer on a material to see a short description of it.

5. **When you find a material you want, click its panel, and then click OK.**

   The Material Picker window closes and the Spec Sheet reappears. The chosen style appears in the Materials area.

6. **To assign the material permanently to the object, click the Lock Materials box.**

7. **Click OK to close the Spec Sheet and return to the Designer views.**

Drawing Your Own Object Shapes

LandDesigner 3D provides many predefined objects. It also gives you the ability to create your own shapes from existing objects. Your drawing options are determined by the type of object you need to create. Once you add these shapes in Top View, they behave like predefined objects in many respects.

Shapes you define yourself fall into two basic categories: closed shapes and lines.

Defining Closed Shapes

Follow these steps to define your own closed shapes such as decks and driveways.

1. **Select an appropriate object in the Object toolbar at the bottom of the screen.**

   For instance, select a pool under the Structures/Water/Pools menu category. If custom shapes are available, the Draw Type button to the right of the Object toolbar changes when you select an object. Click this tool to see which shapes are available.

If an object does not have custom shapes, the Draw Type button looks like the illustration shown at left. Drag the predefined shape into Top View and reshape it later.

2. **With the object selected, click the Draw Type button to the right of the toolbar.**
3. **Select one of the following Draw Types from the menu and define the shape in Top View.**

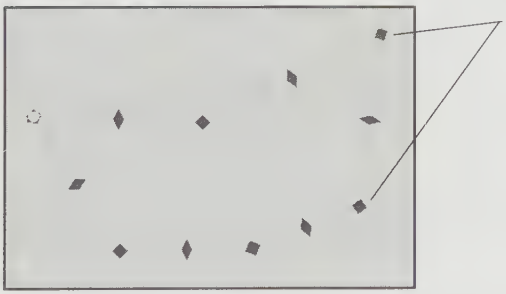
- Select the rectangular or circular shape and click and drag in TopView to define the shape. When you release the mouse button, the object appears.

- Select the Point-to-Point Curve tool. Each time you click in Top View, you define one curve of a free-form, curved shape.

  Continue clicking until you define a closed shape. To end the shape, double-click on the last point or press the Esc, Enter, or Backspace key. Or, connect the last point to the first point. The shape fills in.

- Select the Point-to-Point Line tool. Each time you click in Top View, you define a side of a free-form shape. Continue clicking until you define a closed shape. To end the shape, double-click on the last point or press the Esc, Enter, or Backspace key. Or, connect the last point to the first point. The shape fills in.

- Select the Freehand tool. Point to the start point of the shape. Click and hold the mouse button down. The shape will be drawn as you move the mouse. Draw the line until you have completed the shape. Or, connect the last point to the first point. You do not have to finish on the exact point where you started. The object appears in Top view.



Defining an object with the Point-to-Point Line tool

To reshape these objects in Top View, see the next section.

Defining Line Shapes

Follow these steps to define line shapes such as fences and power lines.

1. **Select an appropriate object in the Object toolbar at the bottom of the screen.**

   If line shapes are available, the Draw Type tool at the right of the Object toolbar changes when you select an object.

2. **With the line object selected, click the Draw Type button to the right of the toolbar.**

3. **Select one of the following Draw Types from the menu and define the shape in Top View.**

- Select the Multi-Line tool, then move to Top View and define the line shape. Each time you click in Top View, you add a point on the shape. Continue clicking until you define a shape you like. To end the shape, double-click on the last point or press the Esc, Enter, or Backspace key. Or, connect the last point to the first point. The object appears in Top View.

- Select the Line tool, then move to Top View. Click once to begin the line, then move the mouse to the endpoint and click again. The object appears in Top View.

- Select the Curved Line tool from the Draw Type menu, then move your mouse to Top View and define the shape. Each time you click in Top View, you define an arc of the shape. Continue clicking until you define a shape you like. To end the drawing, double-click on the last point or press the Esc, Enter, or Backspace key. Or, connect the last point to the first point. The object appears in Top View.

Creating Custom Objects

In some cases, you might want to add your own objects to the design. LandDesigner 3D lets you use pictures of your own objects to create 2D custom objects. 2D custom objects are like cardboard stand-ups that always face you. As you move around them, they turn to face you.

If you are creating an object from a photo, you'll need to convert your photographic image to a bitmap (.BMP) or JPEG (.JPG) file. Your scanner software should tell you how to save the file in one of these file formats.

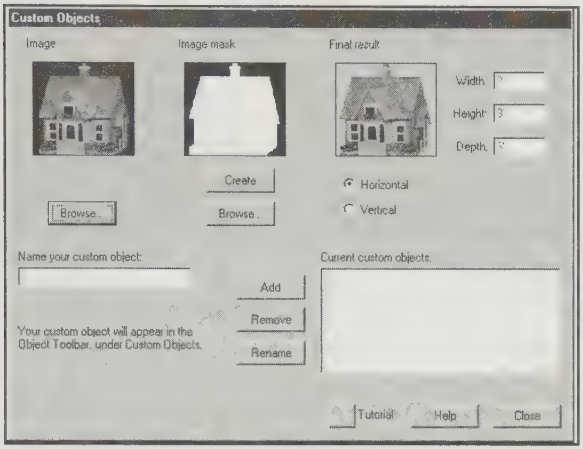
To create a custom 2D object:

1. **Select Add your own Objects from the Features menu.**

   The Custom Objects dialog appears.

2. Click the Browse button in the Image box to open the Open file dialog. Find your bitmap file and click Open.

   This loads your picture into the Image box on the left.



3. Define a mask.

   A mask is used to hide parts of the picture that you don't want to see in your object. For instance, if you have a picture of your cat on your porch, you will only want your object to contain the cat, not the porch. So you need a mask that hides the porch. If you already have a mask defined, you can open it by clicking the Browse button in the Image Mask box. Otherwise, click the Create button to open the Mask Maker.

   In the Mask Maker, use the following tools to mask out the unwanted areas:

   Bucket. Use the bucket to mask out large areas of a similar color, such as a sky background. Set the tolerance level with a number between 1 and 100. A lower number selects fewer pixels because the colors must have greater similarity. A higher number selects a greater number of pixels, but it can select your image as well. A tolerance level of 15 should work for a sky background.

   Block. Use the block tool to select larger areas of pixels away from the image border.

   Pen. The pen tool has a fine point and is useful for masking near the border of the image. Select a pen size to customize the size of the pen point.

   Use the Zoom In and Zoom Out tools to assist you in viewing your work.

   Click OK to save your mask and return to the Create a Custom Object window.

4. Enter the dimensions for your object.
5. Choose between vertical or horizontal orientation.
6. Give your object a name.
7. Click Add to add it to the list of custom objects.
8. You can rename or remove custom objects by clicking the appropriate buttons.
9. Click Close to return to the Design window.

To Find Your Object

Your object can be accessed through the Object toolbar when you are in Top View. Select the first Category button and choose Custom Objects. To preview a custom object, double-click the object. Drag the custom object you want onto your design.

Reshaping Objects

This section explains how to change the shape of objects once they're in Top View. You can change the object's size and rotate the object. If you define your own object shapes, you can reshape them by using the "Pull" and "Stretch" handles.

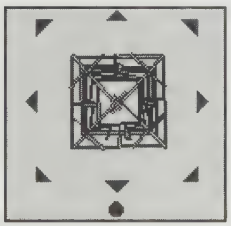
Changing an Object's Size

Sometimes objects look too big, or not big enough, for the design. In such cases you can easily change the object's size.

To change an object's size:

1. **Click once on the object to select it in Top View.**

   The small arrows that appear around the object let you resize it.



2. **Hold the mouse pointer over an arrow, then click and drag the mouse to change the object's size.**

   To increase both the object's width and depth at the same time, drag a corner handle away from the object. To reduce the object's width and depth, drag toward the center of the object. As you drag, the object's current dimensions appear in Top View.

3. **To change an object's size using precise dimensions, double-click the object to change the dimensions in the Spec Sheet.**

   For details on using the Spec Sheet, see Using an Object's Spec Sheet earlier in this chapter.

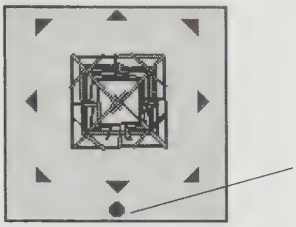
Rotating Objects

If an object is in the right location but the angle is wrong, you can rotate it.

To rotate an object:

1. **Click once on the object to select it in Top View.**

   The dot that appears beneath the object is the spin handle.

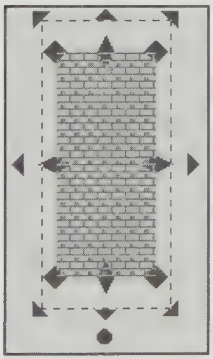


2. **Hold the mouse pointer over the spin handle, then click and drag the mouse to rotate the object.**

Pulling and Stretching Objects

Objects you define yourself, such as lots and ground covers, have additional options for reshaping. When you select an object, you see a set of outer handles and a set of inner handles, as shown in the illustration.

You can resize the entire object proportionally by clicking and dragging the mouse pointer over one of the outer arrows.



Use the inner handles to reshape objects:

- To reposition one of the object's points, hold the mouse pointer over one of the inner arrows on the points around the object. When a "Stretch" handle appears, drag the point to a new location.
- To reposition one of the object's sides (or curves), hold the mouse pointer over one of the inner arrows around the object. When a "Pull" handle appears, drag the side to a new location.

Editing Points of Objects

Once you add your own object shapes in Top View, you can reshape them by right clicking the "Pull" handles of particular points and using the resulting menu options.

Note: You only see this menu after right-clicking a Pull handle. The options are not available with Stretch handles or Move handles.

You have the following options for editing points:

- **Split (add a point).** If you select Split, LandDesigner 3D adds a new point to the shape. You can then use the Pull handles and Stretch handles to reshape the object.
- **Join (remove a point).** If you select Join, LandDesigner 3D removes the selected point and fills in the shape by redrawing the line between the two closest points.
- **Change curve/line.** If you select this option, LandDesigner 3D changes the selected curve to a line. If you selected a line, it changes to a curve.

5 Adding Plants

in LandDesigner 3D

Object Toolbar: Adding plants

The Object toolbar lets you quickly add plants to your design. Choose generic placeholder plants by type and shape to get the overall plantings you want in your design, then refine these later with specific plant varieties. Or look through some of LandDesigner 3D's collections of special purpose plants.

Note: If you already know a specific plant variety you want to add to your design, use the Plant Search window to locate the plant and add it to Your Object Bar. See Using the Plant Search Window for instructions.

To add plants using the Object toolbar:

1. **If you are not already in the Top View, click on the Top tab.**

   You must be in Top View to add plants in the Designer.

2. **In the Object toolbar, click on the left category button and then select Plants.**

   - Using the center button, select the type of plant you want, such as Trees. The toolbar displays generic shapes available for that type of plant.
   - Click on the right button to see other options. Some types of plants, such as annuals, offer a wide variety of generic shapes, based not only on the overall shape of the plant, but on features such as blossom shape. Other types of plants, such as trees, provide lists of specific plants well suited for different regions.

Note: Button selections are hierarchical; your choice in one menu determines the options that appear in the menus underneath it. If you select Plants, for example, furniture and houses cannot be selected. If you use the second button to select trees, only trees will be available for selection. Not all menus have sub-menus.

3. **When you find the plant you want for your design, click its icon in the Object toolbar and drag it into Top View.**

   You can also place the plant in Top View by clicking once on the plant and then clicking once inside Top View where you want the plant.

Note: A brief description of the plant appears when you hold your cursor over it in the toolbar.

4. **When the plant is in Top View, position it properly.**

   For details, see the next section, Positioning Plants.

You can replace generic plants with specific plants once you have placed them in your design. For details, see Using a Plant's Spec Sheet later in this chapter.

Note: To quickly distinguish between generic plants and specific plants, look at their icons in the Object toolbar. Specific plants have an inset photo on their icon.

Positioning Plants

Use the Top View in the Designer to reposition and resize plants. You use the 3D View to see the effects of your work. Any changes you make in Top View apply immediately in 3D View.

Elevation of Dropped Objects

LandDesigner 3D automatically places most plants on the ground. In some cases, however, you might want to change the plant's elevation. For example, you might want to place a plant in a pot or on a deck. For details, see Positioning Decorations and Smaller Objects in Chapter 4.

Moving Plants with the Mouse

To move a plant to a new location in Top View, click it with the mouse. When the "Move" handle appears, select the plant and drag it where you want it.

Moving Multiple Plants

To move multiple plants at one time, you have two options:

- Click the Drag Select button on the right side of the top toolbar, and then click and drag in Top View over the plants you want to move. After you select all the plants, release the mouse. Next, click and drag the mouse on one of the plants you selected. All the selected plants are moved.
- Hold down the Shift key and click on each plant you want to move. When all the plants are selected, release the Shift key. Next, click on one plant and drag the mouse. All the selected plants are moved.

Moving Plants with the Keyboard

By pressing the arrow keys on your keyboard, you can incrementally move a selected plant up, down, left, or right. Click on a plant to select it, then press the up, down, left, or right arrow keys to move the plant. Press the arrow keys as many times as necessary to move the selected plant.

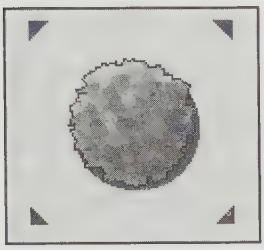
Changing a Plant's Size

Sometimes a plant looks too big, or not big enough, for the design. In such cases you can easily change the plant's size.

To change a plant's size:

1. **Click once on the plant to select it in Top View.**

   Small arrows appear around the plant.



2. **Hold the mouse pointer over an arrow, then click and drag the mouse to change the plant's size.**

   To increase the plant's width and height, drag the mouse away from the plant.

   To reduce the plant's width and height, drag toward the center of the plant. As you drag, the plant's current dimensions appear in Top View.

   If you change a plant's width, the height changes proportionally.

3. **To change a plant to a specific size, double-click it and change the dimensions in the Spec Sheet.**

   You can also select a plant, click the Mini View tab, and change settings in the miniature Spec Sheet that appears.

   For details on using the Spec Sheet, see Using a Plant's Spec Sheet later in this chapter.

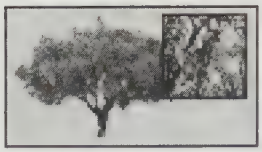
Note: There are additional options for resizing custom plants in LandDesigner 3D. For details, see Adding Garden Beds and Hedges and Defining Ground Cover with the Drawing Tool later in this chapter.

Plants, Plants and More Plants

Generic vs. Specific Plants

You'll find two major categories of plants in this software, generic placeholders and specific varieties. For example, the product includes generic plants such as Generic Round Tree, as well as specific plants such as the Sugar Maple.

Generic



Specific

To quickly add plantings to your landscape, use the generic shapes to get the massing you want, then refine these with specific plants. Each generic plant can be replaced with a specific one once it is in your design. Double-click the plant in Top View to open its Spec Sheet, then click the Replace With button in the window that appears. See Using a Plant's Spec Sheet for more details.

You can also add a specific plant directly to your landscape without replacing a generic placeholder. See Using the Plant Search Window later in this chapter for details. In the Plant Search window, you can search by plant name or by attributes. Add the plants you choose to Your Object Bar, then drag them in to the Top View.

Regional Plants

Use the Object Toolbar to find lists of plants that grow well in a specific region of the country. For example, select Plants in the first category button, choose Tree in the second Category button, and click on the last Category button for a menu list of different regions. To see other plants than those displayed in the regional lists, use the Plant Search window and sort by Zone. See Using the Plant Search Window in this chapter for more details.

Note: These lists are not affected by the zones you pick in the interview.

Collections and Favorites

Using the first button on the Object Toolbar, choose Plant Collections to see lists of plants for special purposes. To see plants that attract hummingbirds, for example, choose Plant Collections in the first menu, Specialty in the second menu and Hummingbirds in the third.

Using the Plant Search Window

The Plant Search gives you access to LandDesigner 3D's extensive database of trees, shrubs, and greenery. Use this feature to add a particular species to your design, replace a generic plant with a specific one, or replace a specific plant with another.

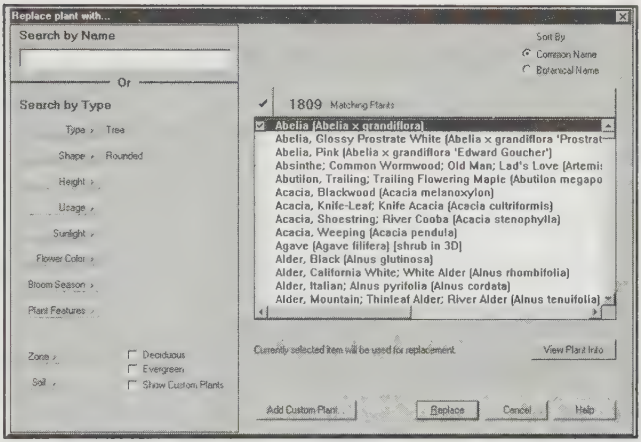
Plants in the Plant Search window show a photograph or illustration and detailed information on size, care, and use.

To locate a specific plant:

1. **Open the Plant Search window using one of the following methods:**
   - To locate a specific plant, click the Search: Plants button in the Object toolbar.
   - To replace one plant in your design with another, double-click the plant in Top View. The plant's Spec Sheet appears. Click the Replace With button.

   The Plant Search window appears.

Note: If you are replacing a selected plant, the Replace Plant With window appears. This window looks like the Plant Search window, but you can only select a single plant to replace the plant in your design.



Plant Search window

2. **To search for plants by name, type all or part of the name in the Search by Name text box.**

   Each letter you type shortens the list of possible matches. If the plant you are looking for does not appear when you type the entire name, try typing just the first few letters.

3. **To sort the plants found in the search, click Common Name or Botanical Name.**

   The Matching Plants list shows the plants matching the search criteria. Scroll through the list to see all the matches. The total number of matches is shown above the list.

4. **To search for plants by different criteria, click an attribute button on the left side of the window, and then select the attributes you want.**

   For example, you can click Type, Shape, and Height and select attributes for these categories from the resulting lists.

   Most attributes are self-explanatory. The Zone button refers to the USDA hardiness zone map, which subdivides the U.S. according to minimum temperatures at which plants can survive. Click the Zone button and select your zone in the resulting list. If you don't know your zone number, click Map from the Zone list and click your zone in the map.

As you increase the number of search attributes, you decrease the number of plants LandDesigner 3D finds. If you select too many search attributes, your search may find no plants.

If you completed the interview when you started your design, the default zone and soil settings correspond to your answers. For details on this interview, see Starting Your Design in Chapter 3.

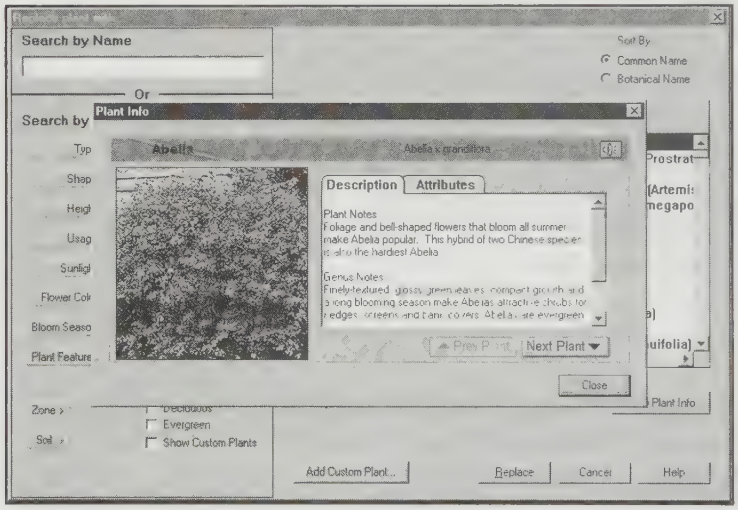
Note: If you want to change your default zone, you must go back to the interview to select a new zone.

5. **To further limit a search to find deciduous plants, evergreens, or previously defined custom plants, click the appropriate check boxes.**

   For details on defining plants of your own, see Adding Your Own Plant Records later in this chapter.

6. **To learn more about a particular plant found in your search, select its name in the Matching Plants list and then click View Plant Info. Or, double-click the plant name.**

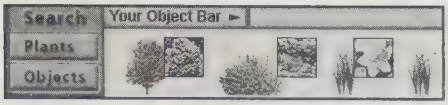
   The Plant Search window displays a picture of the selected plant and descriptive and attribute information for the plant.



Once you select a plant, you have the following options:

- To read a description of the selected plant, click the Description tab. To read about the plant's attributes, click the Attributes tab.
- To see and read about other plants found in your search, click the Prev or Next Plant buttons.
- To return to the Plant Search window shown at the beginning of this procedure, click the Close button.

7. **To add a plant to the Your Object Bar menu in the Object toolbar, click the check box to the left of the plant. Select as many plants as you like, and then click Add to add them all. (If you are replacing a selected plant in your design, select a single plant, and then click Replace.)**



Note: To add a selected plant to your design, you must first add it to Your Object Bar, then drag it into Top View.

8. To quit the Plant Search without adding plants to Your Object Bar, click Cancel.

   If you entered the Plant Search window through the Plants Search button on the Object toolbar, you will return to the Designer. If you added plants to the toolbar, the Your Object Bar menu appears with the plants you selected. You can drag them into your design.

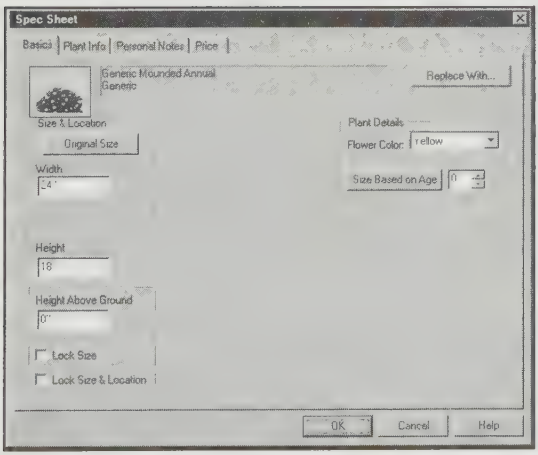
   If you entered the Plant Search through a Plant's Spec Sheet, the selected plant becomes the new selection in the Spec Sheet.

Note: The Your Object Bar menu retains the items found in all searches. If the menu becomes too congested, you can delete individual items or clear the entire toolbar. To delete an item, right-click the item and select Remove This Object. To clear the toolbar, right-click any item, and then select Clear Your Object Bar. Or, select Clear Your Object Bar from the Edit menu.

Using a Plant's Spec Sheet

You can use a plant's Spec Sheet to revise its size, appearance, and other properties.

Note: If you click the Mini View tab, a partial version of the Spec Sheet appears in the Mini View on the left side of the window. You can see the plant's name and revise the plant's width, height, and color. To open the full Spec Sheet from the Mini View, click the Details button.



1. To open a plant's Spec Sheet, double-click the plant in the Top View. Or, right-click the plant and then select Specs from the popup menu.

The Spec Sheet includes the current settings for the selected plant. You can revise any or all of these settings.

2. **To open the Plant Search window and replace the selected plant with another, click the Replace With button.**

   You can use the Replace With button to replace a generic plant with a specific plant variety.

3. **Set the plant's dimensions by entering values in the Width and Height fields.**
4. **To return the plant to its original dimensions, click the Original Size button.**
5. **If you are satisfied with the size and location of a plant, you can lock its settings to make sure they aren't changed accidentally.**
   - To lock the plant's size, click the Lock Size box.
   - To lock the plant's size and location, click the Lock Size & Location box.
6. **To assign a plant a different flower color, click the Flower Color list and select color.**
7. **To display the plant by its size at a certain age, enter an age and then click Size Based on Age.**

   The plant's height and width will change, but the number of its branches and amount of foliage will not.

8. **Click the other tabs in the Spec Sheet to view more information about the selected plant.**

   By default, the Basics tab appears, as shown in the previous illustration. Click the Plant Info tab, for example, to see descriptions and attributes of the selected plant. For details about the options in the other tabs, see Spec Sheets in Chapter 8.

9. **Click OK to close the Spec Sheet and return to the Designer.**

Adding Garden Beds and Hedges

Use the Garden Bed Wizard to quickly lay out an entire bed of plants rather than individually selecting and plotting individual plants.

To begin adding a garden bed, select the Design phase in the Step-by-step toolbar and then click Gardens. A selection of garden bed shapes appears in the Object toolbar. Use the wizard to lay out the bed. If you need help, click the Guide tab at the left side of the window. For a narrated explanation, click the Tutorial button in the Guide tab.

To add a garden bed to your design:

1. **Define the shape of the bed and drag it into the Designer.**

   This is the first step of the garden bed wizard. You have several options:

   - Pick the desired shape of garden bed from the Object toolbar. If the shape you want is not available, use the Free-form Bed tool option (shown with a pencil icon) and then choose a shape from the Draw Type button to the right of the toolbar.

- Select the rectangular or circular shape from the resulting list, then move to Top View and click and drag to define the size of the shape. When you finish, the bed fills in.

- Select the Point-to-Point Curve tool. Move your mouse to Top View and define a free-form shape. Each time you click in Top View, you define one curve of the curved shape. Continue clicking until you define a closed shape. To end the shape, double-click on the last point or press the Esc, Enter, or Backspace key. The bed fills in.

- Select the Point-to-Point Line tool. Move your mouse to Top View and define a free-form shape. Each time you click in Top View you define a point of the shape. Continue clicking until you define a closed shape. To end the drawing, double-click on the last point or press the Esc, Enter, or Backspace.The garden bed fills in.

- Select the Freehand tool. Move your mouse to Top view and to the start point of the shape. Click and hold the mouse button down. The shape will be drawn as you move the mouse. This is like drawing a line in Microsoft Paint. Draw the line until you have completed the shape. You do not have to finish on the point where you started.

2. **Once the garden bed is in the Designer, reposition it and reshape it as necessary.**
   - To move the bed, click it with the mouse. When the "Move" handle appears, drag the bed where you want it.
   - To resize the entire bed, click and drag the mouse pointer over one of the outer arrows around the bed.
   - To reposition one of the bed's points, hold the mouse pointer over one of the inner arrows around the bed. When a "Stretch" handle appears, drag the point to a new location.
   - To reposition one of the bed's sides, hold the mouse pointer over one of the inner arrows. When a "Pull" handle appears, drag the side to a new location.
   - To rotate the bed, select it and click the dot that appears next to it. When a "Spin" handle appears, drag the handle.
   - You can also reshape the bed by right-clicking the "Pull" handles of particular points and using the resulting menu options.
3. **Click the Next button to move to Step 2 of the garden bed wizard.**
4. **Drag plant clusters from the Object toolbar into the bed you defined.**

5. **Click the Next button to move to Step 3 of the garden bed wizard.**
   - Go to the Generic Shapes menu and drag in generic plants that you can replace later with particular species. To replace a generic plant, double-click it in Top View, then click Replace With in the plant Spec Sheet that appears. For more details, see Using a Plant's Spec Sheet earlier in this chapter.
   - Use the Plant Search window to locate specific plants, add them to Your Object Bar, and drag them into your garden bed. See Using the Plant Search Window for more details.
   - To quickly create a row of one type of plant, select the plant, click the Draw Type button, and then click the Hedge button (shown below). Move your mouse to Top View, click to select the first point and click where you want it to end. The hedge draws when you release the mouse.

6. **To change a cluster of plants, right-click on the bed and select UnGroup.**

   You can also select the bed and then select UnGroup from the Edit menu. The plants in the bed become independent. You can then resize, reposition, or delete individual plants as needed.

   To regroup the plants into a cluster after you finish, click the Drag Select button and drag over the group. Next, select Group from the Edit menu.

7. **Click the Next button to move to the last step of the wizard and apply edging to the garden bed.**

   Select the type of edging you want from the Object toolbar, and then move your mouse to Top View and define the edging shape. Each time you click in Top View, you define a point of the shape. Continue clicking until you define the shape you want. To end the drawing, double-click on the last point or press the Esc, Enter, or Backspace key. When you finish drawing the edging location, the edging will fill in automatically.

8. **Switch to 3D View and review your design.**

   Click the 3D tab in the Top View toolbar to go to 3D View. If changes are needed, return to Top View to make them.

Defining Ground Cover with the Drawing Tool

Besides all the tools for adding generic and specific plants, LandDesigner 3D lets you quickly define an area of any shape or length and assign it a vine growth or ground cover.

Ground covers

1. On the Design tab, click Plants, and then select Plants and Ground Covers in the Object Toolbar.
2. Select a generic ground cover plant in the Object toolbar.
3. With the plant selected, click the Draw Type button and then define the plant area you want.

   You have several options in the menu that appears after you click the Draw Type button:

   - Select the rectangular or circular shape from the resulting list, then move to Top View and click and drag to define the size of the shape. When you finish, the area fills in.
   - Select the Point-to-Point Curve tool, then move your mouse to Top View and define a free-form shape. Each time you click in Top View, you define one curve of the curved shape. Continue clicking until you define a closed shape. To end the shape, close it by clicking on the first point of the shape. To have the program close it for you, right click, double click, or press the Esc, Enter or Backspace key. The ground cover fills in.
   - Select the Point-to-Point Line tool, then move your mouse to Top View and define a free-form shape. The area fills in.
4. If necessary, reshape and resize the plant area in Top View.
   - To move the plant area, click the area with the mouse pointer. When the "Move" handle appears, drag the plant area to the new location.
   - To resize the entire plant area, click and drag one of the outer arrows around the area.
   - To reposition one of the area's points, hold the mouse pointer over one of the inner arrows. When a "Stretch" handle appears, drag the point to a new location.
   - To reposition one of the area's sides, hold the mouse pointer over one of the inner arrows. When a "Pull" handle appears, drag the side to a new location.
   - To rotate the area, select it and move the mouse over the dot that appears next to it. When a "Spin" handle appears, drag the handle to rotate the area.
   - You can also reshape the area by right-clicking the "Pull" handles of particular points and using the resulting menu options.
5. Switch to 3D View and review your design.

   Click the 3D tab in the Top View toolbar to go to 3D View. If changes are needed, return to Top View.

Adding Your Own Plant Records

If you can't locate the plant you need in the Object toolbar or the Plant Search window, you can define it yourself and add it to LandDesigner 3D.

To add your own plant record to your design:

1. In the Object toolbar, click the Plants button below the word Search.

   The Plant Search window appears.

2. Click the Add Custom Plant button in the Plant Search window.
3. In the Common Name field, type the name of the plant you want to add.
4. Click the Type and Shape buttons and select the closest matching plant type and shape from the resulting menus.

   The type and shape you select here will determine how LandDesigner 3D displays your plant in the 3D View. LandDesigner 3D offers you hundreds of combinations of plant type and shape, so you should be able to find one that looks similar to your custom plant.

5. To further customize your plant, enter other attributes under Optional Information.
6. To associate a scanned photograph or bitmap with your custom plant record, click Browse and select the graphic from the file navigation window. (A preview of the graphic appears when you select it.)
7. When you finish defining the custom plant, click OK.

   The Plant Search window appears with the custom plant highlighted in the Matching Plants list. This operation might take a few seconds.

8. To add the selected custom plant to the Object toolbar, make sure the plant is selected in the Matching Plants list.
9. Click Add to exit the Plant Search window.

   To change information about a custom plant later, right-click the plant. Open its Spec Sheet, and then click Edit Custom Plant.

6 Refining Your Landscape Design

Irrigation Basics

Sprinklers

Your first goal in the design process is to position sprinkler heads for overlapping or head-to-head coverage. Each spot of ground should be covered by the throw of at least two sprinklers. For full coverage in a rectangular area, first place quarter-circle heads in the corners. Then place half-circle heads midway along each side. If necessary, set one or more full circle heads along the centerline of the area's length.

To design your sprinkler system with LandDesigner 3D, start by taking a sprinkler from the Object toolbar and placing it in the Top View. Use the wide variety of sprays and types of sprinklers to make sure that your basic irrigation plan covers your entire landscape. You can then resize them in the Top View or double-click the sprinkler to use the Spec Sheet.

Pipes

After setting sprinklers, divide the system into pipe circuits. You'll probably need 3/4-inch and 1/2-inch PVC pipe for most circuits unless you have a large yard. Be sure to have an experienced irrigation installer check your piping plan before you shop.

Following are some rules for placing pipe circuits:

- Don't put plants with different watering needs—lawns and shrubs, for instance—on the same circuit.
- The combined flow of all the heads on a single circuit should not equal more than 75% of the total flow rate available.
- All the heads on a circuit must be of the same type. For instance, don't mix spray heads with single-stream heads.

After adding sprinklers, follow these steps to add the pipes that will supply water to your sprinklers. On the Object toolbar, you have a choice of valves, drains and water pipes.

To add a pipe:

1. **Click the type of pipe to add to the design.**
2. **On the design, click a starting point for the pipe.**
3. **Click at each pipe bend, and then right-click at the end point for the pipe.**

If you want to move one end of a pipe, move the mouse over the end of the pipe until the mouse pointer changes to "stretch". Then drag the end to its correct location. To move the whole pipe, move the mouse over the center of the pipe until the pointer changes to "move". Then drag the pipe to the correct location.

Planning Drip

Drip tubing is usually laid above ground, though it may be buried or mulched. Use buried 3/4-inch PVC pipe to supply the circuits and 1/2-inch drip tubing above ground, further branching with 1/4-inch tubing up to 15 feet long. You can use individual emitters or laser-cut 1/4-inch tubing that drips along its entire length.

If you prefer to use a drip irrigation system, choose from irrigation tubing, several types of drips or a bubbler in the Object toolbar.

Using the Shadow Caster

In Top View, the Shadow Caster feature simulates shadows in your landscape design based on time, date, and location. Use the Shadow Caster to see the sun's effects on your landscape over a day or a year. Before using the Shadow Caster, adjust the compass in the Top View. Compass changes affect shadow simulations.

To use the Shadow Caster:

1. **Click the Design tab in the Step-by-step toolbar, and then click Dynamic F/X.**
2. **If necessary, move to Top View by clicking the Top tab in the Top View toolbar.**

   The Shadow Caster is not available in 3D View.
3. **Click the Mini View tab.**

   The Shadow Caster controls and Growth Over Time controls appear. For details on using the Growth Over Time feature, see the next section.
4. **Set the date, time, and latitude you want to simulate.**

   Click the up and down arrows. Or, enter the values directly by highlighting a numeral and then typing a replacement value. When entering values directly, leave the symbols as shown in the fields.

   For information about your city's latitude, call your local branch of the United States Geological Survey. Find them on-line at http://www.usgs.gov. You can also go on-line at http://www.census.gov/cgi-bin/gazetteer where you can enter your location and get your latitude.
5. **Drag the Animate Shadows slider bar to determine how slowly or quickly the shadow effect occurs.**
6. **Click One Day or One Year to determine the period the shadow effect simulates.**

   LandDesigner 3D casts shadows over your design. Watch how the sun and shadow affect your landscape.

Projecting Growth Over Time and Seasonal Change

Use the Growth Over Time and Seasonal Change features of LandDesigner 3D to see how the plants in your design will grow over various time periods. You can use these projections, for example, to determine how closely you should position adjacent plants.

Growth Over Time is visible in the 3D View or Top View.

To use the Growth Over Time feature:

1. **Click the Design button in the Step-by-step toolbar, and then click Dynamic F/X.**
2. **Click the Mini View tab.**

   The Shadow Caster controls and Growth Over Time controls appear. For details on using the Shadow Caster feature, see the previous section.
3. **In the Years field, enter the number of years into the future you want to project plant growth.**

   You can enter this value directly or click the up and down arrows to adjust the number.
4. **To project the plant's growth over the number of years you specified, click Age Plants.**
5. **To reset the plants to their previous age and size, click Reset Age.**

   The plants will automatically revert to their original age when you switch to any other tab or design phase within the step-by-step toolbar. To permanently change a plant's age, use the Spec Sheet, as described in Chapter 5. For example, you can make an oak 10 years older than younger plants in your design.
6. **To see how plants will look in various seasons, move to 3D View and then drag the Seasonal Change slider bar.**

   This can take some time to draw, especially if you have several plants. Please be patient.

Design Review

LandDesigner 3D assists you with finding common problems in your design.

Start the Design Review by selecting Design Review from the Features menu or by clicking the Finish tab on the Step-by-step toolbar.

Using the Design Review

1. **Click the Design Review button on the Finish Tab.**

   Sierra LandDesigner 3D automatically checks your design.
2. **Click on the Problems tab next to the Guide tab to review the problems found.**

When you click on a problem in the list, the objects that problem refers to will appear in the Top View highlighted in red. You can turn off the highlighting by clicking the Hide Pointers button.

As you review the problems, you can make changes to the design to correct the problems. For instance, you may move a sun-loving plant from the shade into a sunny area. When you do this, you can clear the problem by clicking the Review All button.

Note: There are several categories of problems the Design Review can look for. Customize the types of problems the Design Review looks for by using the Options dialog box in the Edit menu.

Changing Backgrounds and Ground Covers

If you don't like the default background image and ground cover LandDesigner 3D uses in your landscape designs, you can change them. Follow the steps below.

Note: The 3D Ground applies to your entire design. It is different from ground covers you add from the Object toolbar, which apply only to particular planted areas.

To change your default background and default 3D ground:

1. **Select Options from the Edit menu.**
2. **Click the View tab.**
3. **Click the Change 3D Backdrop button.**

   To insert your own bitmap image, click Choose My Own. Use the Open window to select a .bmp file from your hard drive. For more details on preparing your own background images, see the next section.
4. **Select a background, and then click OK to return to the Options dialog box.**
5. **Click the Change 3D Ground button.**
6. **Use the following options in the Material Picker window to find the ground cover you want:**

   To view different material types, click the material buttons on the left side of the window.

   After you select a category, scroll through the displayed panels to look at your choices. Place your mouse pointer over a panel for a short description.
7. **Select a ground cover, and then click OK.**

   The Material Picker window closes.
8. **Click OK to close the 3D View options and see the new ground cover and background in the Designer.**

   The background and ground cover are applied to the entire design. You can add more ground covers to particular planted areas from the Object toolbar.

Preparing Your Background

You can prepare your own background images for landscape designs in the graphics program of your choice. You can also copy images from other applications or Web sites. Use the following guidelines to create the image:

- Correct for accidental tilting and aspect ratio and adjust brightness and contrast as needed.
- Size your image to a height of less than 480 pixels. Images with greater heights appear centered in LandDesigner 3D, with the top and bottom truncated. The image can have any width, including panoramic dimensions of more than 1,000 pixels.
- Save the background image as a Windows Bitmap (.BMP) or JPEG (.JPG) file. You're ready to open the image as your design background. See the previous section for instructions.

Creating Custom Materials

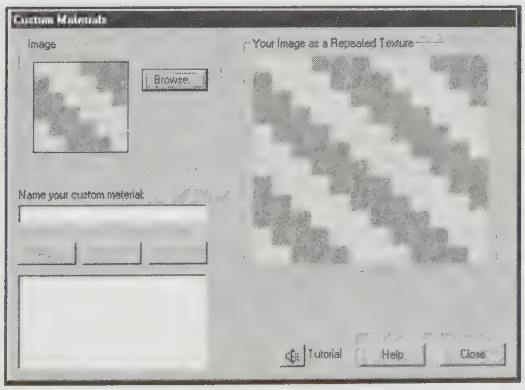
If you'd like to customize an object, you can import graphics as images to use as materials in your design. For instance, you might want to change the appearance of the house to match your own house. If LandDesigner 3D does not have a suitable wall material, you can create your own.

There are two ways to do this. If you have a bitmap or JPEG picture of the material, you can use Add Your Own Materials from the Features menu to turn it into a material. You can also start with one of several material templates and color them to your satisfaction using Material Painter from the Features menu.

After you have created the new material, it can be found by selecting Custom Materials under the My Materials button in any object's Materials Spec Sheet.

To create a material:

1. **Select Add Your Own Materials from the Features menu.**



Create a Custom Material Screen

2. **Browse for the image you wish to import.**

   The best size for an image is 128x128 pixels. Most graphic software that comes with digital cameras or scanners allows you to edit the image to be this size.

3. **View your image as a repeating pattern.**

   After you select the graphic, the area on the right displays the new material so you can see what it looks like. You can edit the bitmap in an image editor to make it look the way you want.

4. **If you're satisfied with your results, enter a name for the new material and click Add.**

   The material is added to the list of custom materials.

5. **To rename or remove a custom material, select the material name, and then click Rename or Remove.**

6. **Click Close to return to the design window.**

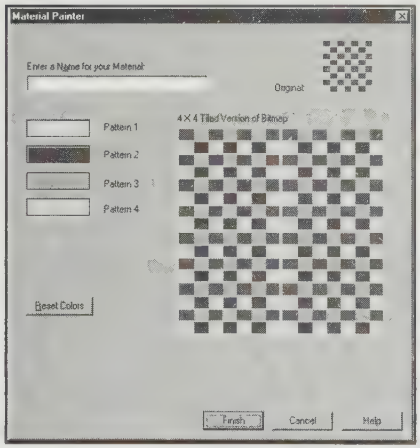
To create a custom material using the Material Painter:

1. **Select Material Painter from the Features menu.**

   A menu of available patterns appears.

2. **Choose a pattern, and then click the Next button.**

   The material's color fields are displayed to the left of the material.



Material Painter Screen

3. **Click on a color to edit.**

   A color menu appears.

4. **Select a sample from the basic colors or color spectrum.**

   To create a new custom color, click within the color spectrum until you achieve the correct hue in the color square just beneath it. Then, click the Add to Custom Colors button. The color is added to the selection on the left.

5. Click OK.
6. Type a new name for the material, and click Finish.

   The new material appears as a Custom Material in any object's Materials Spec Sheet.

To apply the new material to an object:

1. Click the object.
2. Right-click the object, then select Specs.
3. Click Materials.
4. Select My Materials, and then select Custom Materials.
5. Select a material for the object.

7 Additional Features

and Tools in LandDesigner 3D

Recording Snapshots and Walkthroughs

LandDesigner 3D lets you save your favorite views and animated tours in each design. You can then view these Snapshots and Walkthroughs at any time, sharing them with others to help them envision your ideas. Walkthroughs and Snapshots are an ideal way to communicate with contractors and landscape designers.

Taking Snapshots

A Snapshot is a record of a favorite 3D view in your landscape design. Snapshots are a good way to save a list of sites in your design for quick review. In a sense, a Snapshot is like a bookmark – it saves a position and a view in your design that you can return to later.

To record a Snapshot:

1. **Select Recorder Control from the Features menu, and then click Snapshot.**

   The Recorder Options window appears.
2. **Use the 3D View controls to show the area you want to record in the Snapshot.**
3. **Click the Take Snapshot button to store the Snapshot.**
4. **Type the name for your Snapshot in the Name field.**

   If you don't want to name the Snapshot, you can use the generic name LandDesigner 3D assigns automatically.
5. **Click Close to exit the Recorder Options window.**

   You can now view the Snapshot in LandDesigner 3D whenever the saved design file is open.

To view a Snapshot:

1. **Select Recorder Control from the Features menu and then click Snapshot.**
2. **Select the Snapshot you want to view from the list.**
3. **Click Go To View to view the selected Snapshot.**

   To delete a Snapshot, select it in the list and click Delete.
4. **Click Close to exit the Recorder Options window.**

Recording a Walkthrough

A Walkthrough is an animated, 3D tour of your design in LandDesigner 3D.

To record a Walkthrough:

1. **Position the camera in Top View where you want to begin your Walkthrough.**

   You can further adjust this beginning view by switching to 3D View and using the navigation arrows in the Object toolbar. See Chapter 2 for more details on moving the camera and navigating the 3D View.

2. **Switch to 3D view, select Recorder Control from the Features menu, and then click Walkthrough.**

   The Recorder Options window appears.

3. **Click Record to begin recording the Walkthrough.**
4. **Navigate through your 3D scene along the path you want to record.**

   The Walkthrough feature stores all of your movements as well as their speed.

5. **Click Stop to end the Walkthrough recording.**

   The Stop button only works while you are recording.

6. **Type a name for your Walkthrough in the Name field.**

   If you don't want to name the Walkthrough, you can use the generic name LandDesigner 3D assigns automatically.

7. **To save the recorded Walkthrough as an .avi video file, click the Save button.**

   LandDesigner 3D warns you that the file might be large and might take a long time to create. To proceed, click Yes. When the file is complete, LandDesigner 3D prompts you to assign the file a name and directory path.

   The file is saved in .avi format that can be played outside LandDesigner 3D in a Windows video program. You do not have to save an .avi file to play back the animated Walkthrough in LandDesigner 3D when the saved design file is open.

8. **Click Close to exit the Recorder Options window.**

To play back a Walkthrough:

1. **Select Recorder Control from the Features menu, and then click Walkthrough.**
2. **Select the Walkthrough you want to view from the list.**
3. **Click Play to view the selected Walkthrough.**
4. **While the Walkthrough is playing, you can click Stop to halt playback.**
5. **Click Close to exit the Recorder Options window.**

Note: Click Render 3D Photo Quality to create a high-quality single image. For more information, see High Resolution Imaging Using Raytracing, in the next section.

High Resolution Imaging Using Raytracing

Raytracing is a sophisticated form of rendering or drawing that is used to display the view in very high detail, with realistic lighting effects, such as shadows, highlights, contrast variations and reflections. Many of the amazing visual effects used in Hollywood movies use this technique. You can use the high resolution raytracing feature of Sierra LandDesigner 3D to create very detailed, photorealistic images of your designs.

Raytracing is an intensive task and can take from several minutes to several hours to complete a single image. Use Snapshots when you want to be able to return to the same vantage point repeatedly. Use high-resolution raytracing any time you want a high-quality image for your own use or to share with others. You'll probably want to make a small image first to make sure you are at the vantage point you really want, before starting on a large image.

To make a High Resolution 3D Photo:

1. **Select Render from the Features menu.**

   You can make a rendering of the current view, or of a previously saved Snapshot.

2. **Select Render this View.**

   The Render a 3D Image dialog box appears.

3. **Select the Date and Time for the image.**

   LandDesigner 3D adjusts the lighting to match the time and date you specify.

4. **Select a Camera Lights option from the pull down list.**

   This option affects the apparent light used in the image. Each choice has a different effect on the contrast in the image and the appearance of highlights and shadows. Available light corresponds to taking a picture using ambient light without a flash. Single Soft Fill is similar to a built in flash on a camera. Single Hard Fill is like a brighter built in flash. Multi Soft Fill is similar to a soft light on either side of the camera. Multi Hard Fill is like two brighter lights on either side of the camera.

5. **Select the Rendered Image Size.**

   Rendering can take a long time, especially for large images. Be prepared to go get a cup of coffee if you pick a large size image. If you choose the Custom option, you can specify your own image size in pixels.

6. **Select Anti-alias to sharpen object edges within the image.**

   Selecting this option greatly increases the time required to generate the image.

7. **Click the Start button to begin.**

   After you click the start button, you'll see the rendering start to occur in the window on the right. A progress bar and a Percent Complete display show how much of the view has been rendered.

8. **While you wait, you can switch back to LandDesigner 3D and continue working.**

   Click the Minimize button in the title bar, or switch to another program. The rendering continues in the background. When it is complete, the window opens again to display the results.

9. **Save the image by clicking the Browse button.**

   The rendered image can be saved as a .bmp file. Most image editing programs allow you to edit and print .bmp files.

You can also make high resolution renderings of snapshots you have made.

To make a High Resolution 3D Photo of a snapshot:

1. **Select Render from the Features menu, and then select Render Recorded Snapshots.**
2. **Click the Add button to add Snapshots to the list of Files to Render on the right.**
3. **Select each file on the right in turn to set the rendering details.**

   Select the time and date to simulate in the image, and then select the Rendered Image Size. You can also change the file and path if you want.
4. **Click Start to begin.**

   When rendering snapshots, you will not be able to switch to LandDesigner 3D and let the rendering occur in the background.

   Once the rendering is complete, you can view the files in any graphics program that can read .bmp files.

Using the Shopping List

Use the Shopping List to get an idea of how much your design might cost to build from scratch. The Shopping List also helps you keep track of selected design elements, as well as their quantities, unit prices, and subtotals. You can use it in conjunction with Walkthroughs, Snapshots, and high-resolution photos to show others what you have in mind.

To view the Shopping List:

1. **Select the Finish phase in the Step-by-step toolbar, and then click Shopping List.**

   The Shopping List window appears. Each major category of design elements is shown with a plus/minus (+/-) button on the left side of the list.
2. **Click a category button to see a breakdown of costs within the category.**

   Click the button again to hide the details. When details are hidden, the category button appears with a plus (+) sign.

Adding Notes

You can add notes for objects in your design. Notes you add will appear in the right column of the shopping list.

To add a note to an object:

1. Click the object to select it.
2. Double-click the object. Or, right-click the object and then click Specs.
3. Click the Personal Notes tab, and type personal notes for the object.
4. When finished, click OK.

Viewing All Objects in the List

Most plants and objects you add to a design appear in the Shopping List. If you select Options from the Edit menu and then click Show All on Shopping List from Program tab, all items appear on the Shopping List.

Modifying Prices

To modify the price of a particular plant, double-click the object in the Top View to see its Spec Sheet. Click the Price tab and revise the price. Not all objects have prices.

Adjusting Column Widths

The Shopping List has columns for an object's name, size, quantity, unit price, subtotal, and notes. To adjust the width of a column, move the mouse over the side of a column heading until the cursor changes. You can then click and drag the mouse to resize the column.

Exporting a Shopping List

If you want to crunch the numbers for the estimated costs of your design, you can export the Shopping List to a text file. You can then import this file into a spreadsheet application such as Microsoft Excel.

Note: The Export Spreadsheet function creates a text file that is specifically formatted for spreadsheet applications. You can open the file with other programs, but you may need to manually align file information.

To export the Shopping List:

1. Click the Export Spreadsheet button in the Shopping List window.
2. In the window that appears, enter a name for the shopping list in the File Name field.
3. If necessary, save the file to another folder.

   By default, the file is saved to the C:\Sierra\Land3D\Designs folder.
4. Click Save to export the Shopping List as a file.
5. Open the Shopping List file in another program such as Excel or Notepad.

Printing a Shopping List

To print a Shopping List:

1. Select Shopping List from the Features menu. Click the Print button.
2. Type a title to appear at the top of the report. Or, clear the Title text box to print the report without a title.
3. Check the columns you wish to see displayed in your printout.
4. If you have several identical items listed, you can combine items by checking the Merge Similar Items box.
5. Choose between large, medium and small font sizes.
6. Select the orientation for the printed shopping list. (Landscape orientation works best for most lists.)
7. Click OK to print.

Design Guide

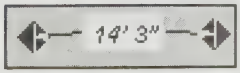
For quick landscaping tips and design information, use the Design Guide. To open the Design Guide, use the Design Guide menu or click the button shown below. You can view any of the topics by selecting one of the chapters and double-clicking. You can go back or forward a page, or search for a particular topic of interest, from anywhere in the guide.

Note: The sidebar text on the left side of the screen often contains links to the Design Guide. Click a link to start the Guide and display the selected topic.

The Design Guide also contains handy estimators. If you are working with concrete and have a material cost, you can estimate the total materials needed and their cost before you even get dirty. If you decide to plant a lawn, use the lawn selector; it will ask you the right questions to get the grass that will work best for you.

Using the Measuring Tape

It's useful to know the distance between plants or other objects in your design. Use the Measure tool in the Top View toolbar to measure the distance between any two points in Top View. Click the Measure tool, then click two points in the Designer—one where you want the measurement to begin, and the other where you want it to end. A line is drawn from the starting point to the ending point. A label appears in the middle of the line. The label shows the line length.



You can move, resize, or delete a measurement.

- To move a measurement in Top View, click and drag it anywhere between its endpoints.
- To resize or rotate a measurement, first click it to display its endpoints, then click and drag either endpoint.
- To delete a measurement, select it and press Delete.

You can change the appearance of measurement labels.

To change label appearance:

1. Double-click a measurement label. Or, right-click a label, and then click Specs.
2. Select a font, style, and type size for the label.
3. In the Effects box, select strikeout, underline, or color for label text.
4. Select Draw Border to place a line around the edge of the label.
5. Select Show Inches Only to display the measurement entirely in inches. (If you are using the Metric system, the option lets you select and display measurements in centimeters.)
6. Select a background color for the label.
7. Click OK to save the new settings.

Other Measurement Tools

In addition to the Measure tool, LandDesigner 3D has other features that help you measure aspects of your design:

- **Dimensions in Top View.** The Top View displays a plant or object's width and depth as you resize it. To resize a plant or object, click it to select it, then drag one of the arrows around it.
- **English versus metric units.** LandDesigner 3D uses English units to display dimensions by default.
- **To switch to metric units,** select Options from the Edit menu, click the View tab, and click Display Metric Units. To switch back to standard units, repeat the previous steps.
- **Grid in Top View.** To help you align objects and assess spatial relationships in Top View, you can display a grid over it. To turn on the grid, select Options from the Edit menu, click the View tab, and click Display Grid. You can also change the grid spacing, if necessary.

Saving Your Design as a Sample

Once you finish your design in LandDesigner 3D, you can save it as a sample design. It can then serve as a template for future designs.

To save your design as a sample in LandDesigner 3D:

1. Select Save as Sample File from the File menu.
2. In the next window, type a name for the sample and click OK.

   The design you created is now available at any time when you select Open Designer Gardens from the File menu and select the My Samples tab.

To open a sample design:

1. Select Open Designer Gardens from the File menu. Or, select a sample design after starting LandDesigner 3D.
2. Click the plus (+) sign by the My Samples folder to see the samples you've created.
3. Select a sample design, and then click OK.

Note: To delete a sample design you've created, find the file called personal.3tl in the C:\SIERRA\Sierra Land3D\bin\template folder. Open the file with any Windows word processor or with a text editor such as WordPad or Write. Each sample template begins with "My Samples" and is followed by the name you assigned. Delete the line for each template you want to remove.

Sharing Your Design

It's easy to share your design with others. You can print, email, and export your design. You can also share your design over the Internet with another LandDesigner 3D user. This section explains each option.

Printing the Design

LandDesigner 3D gives you several options for printing your landscape design.

If you select the Finish phase in the Step-by-step toolbar and then click Print Plans, the Designer displays options for printing the Top View, the 3D View, or the Shopping List. Click the option desired, then click OK in the resulting window to print the view or list.

If you don't want to use the Step-by-step toolbar, you can print your design at any time by following the steps below.

To print your design in 2D:

1. Select the Top View tab.
2. Select Print from the File menu.
3. Enter a title if desired, and then select the desired scale for your printout.
4. Optionally, select Scale and Ruler to print them on your design.
5. Select Hide Area Fills to print area outlines only, and then click OK.
6. Specify a paper orientation (landscape or portrait), and the type of paper to use. Click the Properties or Options button to select advanced print settings, and then Click OK.

To print your design in 3D:

1. Select the 3D view tab, and then select the view to print.
2. Select Print from the File menu.
3. Specify a paper orientation (landscape or portrait), and the type of paper to use. Click the Properties or Options button to select advanced printing settings, and then click OK.

E-mailing Your Design

If you have a modem and a MAPI-compliant e-mail program (see your email application's manual) such as Microsoft Exchange or Outlook, LandDesigner 3D allows you to e-mail your designs to others. For others to view your file they must also have LandDesigner 3D. Before you e-mail your design, save it on your hard disk.

(If you do not have an e-mail program or an internet connection, do not use this command.)

To e-mail your design:

1. Select Mail This Design from the File menu.
2. Send an e-mail message as you normally do.

   Your design is sent with the e-mail as an attachment.

Exporting a Design

To incorporate a screen capture of your 3D View into another document, use the Export Bitmap command in the File menu. The Export Bitmap command is not active in Top View (2D).

LandDesigner 3D saves the 3D View as a two-dimensional bitmap image. You can then bring the bitmap (.bmp) into a graphics program or word processor to suit your needs. If you want a higher quality image, see the section on high resolution raytracing earlier in this chapter.

To export your design as a bitmap:

1. From the Design tab, click the 3D tab in the Top View toolbar to go to 3D view. (You cannot export the Top View as a bitmap image.)
2. Select Export Bitmap from the File menu.
3. In the Save window that appears, enter a name for the file in the File Name field. (Optionally, select a file type, such as 8-bit or 16-bit.)
4. If necessary, assign the file to another directory.

   Use the navigational controls in the Save window to change directories on your drive. See your Windows manuals if you need more information.
5. Click Save to save the file.
6. Open a graphics program or word processor and import the bitmap.

   If you need help with this step, see the documentation for the program you're using.

Sharing a Design Over the Internet

You can use this feature to show another user your designs over an IP (Internet Protocol) network. Note that both you and the sender/recipient of the design need to be connected to an IP network and have LandDesigner 3D running on your computers. When connected, the sender's LandDesigner 3D display appears on the recipient's screen. You can even play a saved Walkthrough for the recipient.

To send your design to another computer:

1. Select Recorder Control from the Features menu, and then click Virtual Tour.
2. Click Share a Design.
3. Type in the IP network number of the recipient, and then click Connect.

   This number appears in the recipient's View a Design dialog box. This connects you to the recipient's computer. Now your display will appear on the second computer. You can take the recipient on a Walkthrough of your design by navigating in 3D view. Type notes to each other in the Edit Field inside the Design Sharing dialog box.

   The recipient can navigate within the design on his or her screen, but cannot change the view on your screen. Click **Let the other guy drive** to allow the remote user to navigate and change the view on your screen.

To receive a design from another computer:

1. Select Recorder Control from the Features menu, and then click Virtual Tour.
2. Click View a Design.

   Your IP address will be displayed. Give this number to the sender so he or she can enter it. Once the sender installs your address, his or her design will appear on your screen.

Improving Speed When Working With the Object toolbar

The Object toolbar can show photo insets on the icons of specific plants. You can improve speed by disabling the photo inset display. Choose Options from the Edit menu to see the Options dialog box. Choose the Program tab, and then choose Hide plant photo insets in object bar to hide the photo insets.

Mixing Curves and Lines in a Shape

You can change a portion of a curve to a line (or vice versa) by right-clicking on the diamond shaped handles and choosing Change curve/line from the popup menu. By default, the draw tools create shapes that contain either only curves or only straight lines.

Controlling Curves

By adding extra "points" to a curve, you will gain more control and flexibility while reshaping. Right-click on a diamond shaped handle and choose Split (add a point) from the popup menu.

Selecting and Moving Small Objects

To select and move small objects on top of a larger object without inadvertently moving the large object, double-click on the large object and click the Lock Size & Location checkbox (on the Basics tab under the "Height Above Ground" field).

Selecting and Deselecting Multiple Objects

When you have several objects selected and want to deselect one without deselecting them all, click the right mouse button on one of the selected objects. Click "Select object" from the popup menu that appears. Each selected object has a check mark next to it. To deselect an object, click it to remove the check mark.

Copying Materials in the Spec Sheet

It can be tedious to select the same material for multiple areas for the same object. To copy the material shown in one panel of the Spec Sheet to another panel, simply click the first panel, drag the mouse to the panel you want to change, and release the mouse.

LandDesigner 3D Reference

Menu Reference

The previous chapters of this guide explain how to use particular menu options in LandDesigner 3D. Use this section if you need a quick description of any menu option or toolbar.

The menu options are at the top of the LandDesigner 3D window. The program contains the following menus:

- **File menu.** Use the File menu to open and save the files you create in LandDesigner 3D. You can also use File options to print designs, e-mail them, and export them as bitmap graphics.
- **Edit menu.** Use Edit options to select, copy, group, delete, and lock objects.
- **Features menu.** Features options allow you to customize LandDesigner 3D. You can create custom objects and materials, and create and apply custom colors to objects. Features options also let you record Walkthroughs, Snapshots, and Photos. You can use Features options to start any of the LandDesigner 3D wizards.
- **View menu.** Use View options to switch between 2D and 3D views, zoom in or out, and search for plants and other objects.
- **Design Guide menu.** Use Design Guide options to get tips and information for designing your landscape.
- **Help menu.** Use this option to access the online help system and view credits, copyrights, and version information.

Click a menu to see its options. You can also open a menu by holding down the Alt key and pressing the key that matches the underlined letter in the menu name. For example, you can open the File menu by pressing Alt and F.

The following sections describe each LandDesigner 3D menu and its options.

Note: Not all options are available at all times. Unavailable options appear dimmed.

File Menu

New	Opens a new Designer screen in LandDesigner 3D, where you can create a new design.
Open	Opens an existing LandDesigner 3D file.
Open Designer Gardens	Opens a LandDesigner 3D sample design.
Save	Saves your current open file.

File Menu – continued

Save As	Saves the current design under a new name, leaving the original file unchanged.
Save as Sample File	Saves your design as a sample landscape, so you can use it again to develop other designs. You'll find these samples in the Open Sample dialog under the tab labeled "My Samples."
Mail This Design	Allows you to e-mail your design. You must have e-mail software on your computer to use this command.
Export Bitmap	Saves your current 3D View as a two-dimensional bitmap image, which you can later open in a graphics program. This option is only available while in 3D View.
Print	Prints the contents of either Top View or 3D View, depending on which window is active.
Print Preview	Displays the design on screen as it will appear when printed.
Print Setup	Use Print Setup to specify a printer, paper orientation, and type of paper used. Click the Options or Properties button to select advanced printing settings. Press F1 in Print Setup for online help.
Exit	Exits LandDesigner 3D.

Note: The names of recently opened design files appear in the File menu just above the Exit option. Click the file name to open the file.

Edit Menu

Undo	Cancels your last action in the Designer.
Cut	Removes the selected item and puts it on the clipboard. You can then paste the item elsewhere. This command is available only if an item is selected. Cutting items to the clipboard replaces the contents previously stored there.
Copy	Copies the selected item onto the clipboard. You can then paste the item elsewhere. This command is available only if an item is selected. Copying an item to the clipboard replaces the contents previously stored there.
Paste	Inserts a copy of the clipboard contents into your design. This command is unavailable if the clipboard is empty.
Delete	Deletes the selected object in Top View.
Select All	Selects all objects in Top View.
Select None	Deselects all currently selected objects in Top View.

Edit Menu – continued

Drag Select	Selects multiple plants and objects in Top View. After selecting this option, click and drag your mouse over the appropriate plants and objects in Top View.
Group Objects	Binds multiple items together as a single grouped object.
UnGroup Objects	Turns grouped items into independent objects.
Lock Selected in Place	Locks a selected object in place to prevent it from being moved accidentally. When the selected object is locked, this menu option changes to Unlock Selected. If you select this option again, the object becomes unlocked.
Clear Your Object Bar	The Your Object Bar menu retains the items found in all searches. If the menu becomes too crowded, clear it by selecting this option.
Options	Use to configure LandDesigner 3D display and program settings. For a list of options, see the next section.

Options Dialog in the Edit Menu

Use the controls in the Options dialog box to enable or disable sound and to control various display and other program settings. The Options dialog box contains three tabs.

Program tab

Growth Rate	Drag the slider bar to indicate how quickly plants typically grow in your area.
Hide Plant Photo Insets in Object Bar	The Object toolbar can display photo insets of plants. When this option is turned off, the program may run faster.
Show All on Shopping List	Most, but not all items in LandDesigner 3D have prices associated with them. Check this box to see prices for all items in your design on the Shopping List that have a price.
Program Sounds	When you select this check box, all sounds play in LandDesigner 3D. When deselected, sounds are turned off.
Walkthrough Sound	Lets you specify the sound you hear while navigating the 3D View. By default, you hear footsteps. To hear a sound, select it and click Audition.

View tab

Scene Lighting	Increase the amount of light to brighten the 3D View. Decrease the amount of light to make the 3D View darker.
Choose Quality of Scene	Select one of the options to set the display quality of the 3D View. For more information, see Improving 3D View Speed later in this chapter.
Change 3D Ground	Click this button to change the default ground cover of your landscape design. For details, see Chapter 6.
Change 3D Backdrop	Click this button to change the background setting of your landscape. For details, see Chapter 6.
When I Take a 3D Photo...	There are two options. You may choose to use the depth-of-field blur, which is a camera-like feature. The other option allows you to change the time-of-day shading when rendering a high-resolution graphic.
Display Grid	If you check this box, LandDesigner 3D displays a grid in Top View to help you align objects.
Display Metric Units	Allows you to switch between displaying dimensions in English or metric units. Check the box to display metric units.
Hide Area Fills	Select to print an outline of all of the items in your design. This feature is especially useful when printing in black and white.
Enforce Minimum and Maximum sizes	Some objects have minimum and maximum sizes. You can enforce these limits by putting a check in this box. If you don't select this option, you can resize objects to any size.
Set 2D Grid Spacing	If you display a grid in Top View, you can vary the grid spacing with this control. Click Default to return to the default spacing (10 feet).
Plant Labels	The Plant Labels option lets you show the full name or plant type (shrub or annual, for example) for each of your plants. In addition, you can select the font, type size, and effects for your plant labels and notes.

Design Review tab

Design Review checks all selected items	This list of options determines the factors that the Design Review considers when examining your design. Clear options to reduce the amount of advice that the design review generates. For instance, if you are not interested in irrigation, clear the "Check for existence of irrigation systems" checkbox.

Features Menu

Features options allow you to customize LandDesigner 3D. You can create custom objects and materials, and create and apply custom colors to objects. Features options also let you record Walkthroughs, Snapshots, and Photos. You can use Features options to start any of the LandDesigner 3D wizards.

Add your own Objects	This feature allows you to bring your own objects into the program. See Chapter 6 for more information.
Add your own Materials	This feature allows you to bring your own materials into the program. See Chapter 6 for more information.
Material Painter	This option allows you to create your own color schemes using existing patterns or designs from our database. See Chapter 6 for more information.
Wizards> Interview Wizard	This wizard asks you questions about your zone, climate, soil type and common or Latin name preferences. These become the defaults for the program. To change them, you must run the wizard again.
Wizards> Lot Wizard	The Lot Wizard takes you through the following three steps to define your lot: setting dimensions, laying down the property lines, and setting the compass.
Wizards> House Wizard	The House Wizard helps you quickly build a facsimile of your home in the landscape design.
Wizards> Slope Wizard	The Slope Wizard lets you create slopes and grades.
Wizards> Irrigation Wizard	Starts the Irrigation Wizard. The Irrigation Wizard helps you create an irrigation system for your design. See Irrigation Basics in Chapter 6 for more information on using these tools.
Wizards> Garden Bed Wizard	Starts the Garden Bed wizard. The Garden Bed wizard helps you quickly create garden beds, place plants, and set edgings.
Render> Render This View	Record a high quality photorealistic 3D image of your design. See Chapter 7 for more information.
Render> Render Recorded Snapshots	Use this feature to render a Snapshot in 3D View. For details, see Chapter 7.
Recorder Control> Walkthrough	Use this feature to record a Walkthrough in 3D View. For details, see Chapter 7.
Recorder Control> Snapshot	Use this feature to record a Snapshot in 3D View. For details, see Chapter 7.
Recorder Control> Virtual Tour	Lets you share your designs with another LandDesigner 3D user over the Internet. See Chapter 7 for instructions.

Features menu–continued

Dynamic F/X> Shadow Caster	Use this feature to see how shadows fall across your design in Top view. See Using the Shadow Caster in Chapter 7 for instructions.
Dynamic F/X> Growth Over Time	Use this feature to see how the plants in your design will mature over time. See Projecting Growth Over Time and Seasonal Change in Chapter 6 for instructions.
Dynamic F/X> Seasonal Change	Use this feature to see how the plants in your design change according to season. See Projecting Growth Over Time and Seasonal Change in Chapter 6 for instructions.
Design Review	The Design Review searches for possible design problems, from irrigation or wall measurement to tree locations and much more. See Chapter 6 for more details.
Shopping List	The Shopping List keeps track of the plants you add to your design, including their quantities, and gives the subtotal for your entire design. This is an estimate.
Resources	Use this feature to access a variety of useful resources for gardeners, including recommended books, magazines, organizations, and web sites.

View Menu

Use View options to switch between 2D and 3D views, zoom in or out, and search for plants and other objects.

2D View	Use to switch to the 2D View of your design. 2D View is an aerial floor plan you use to add plants and other objects.
3D View	Use to switch to the 3D view of your design. 3D View provides a realistic view of your design.
Zoom> Zoom In	Allows you to view your design from a closer vantage point.
Zoom> Zoom Out	Allows you to view your design from farther away.
Zoom> Zoom to Lot Size	Resizes Top View to display the complete lot.
Search Options> Plant Search	Opens the Plant Search window. Use this feature to locate specific plants and add them to Your Object Bar.
Search Options> Object Search	Opens the Object Search window. Use this feature to locate objects and add them to Your Object Bar.

Design Guide Menu

Use Design Guide options to get tips and information for designing your landscape.

Contents	View the contents of the Design Guide. Click a topic for information.
Search	Search for a topic of interest in the Design Guide.
Chapters	Go to a selected chapter of the Design Guide.

Help Menu

Use this option to access the online help system and view credits, copyrights, and version information.

Contents	View the contents of the online help. Click on a topic for more information on any subject.
Credits	See the list of people who developed LandDesigner 3D.
About	View information about the product.
Version	See the version number of the LandDesigner 3D software.

Improving Performance

You might find the following tips helpful when using LandDesigner 3D:

Hardware Acceleration

You can take advantage of hardware acceleration by choosing Options from the Edit menu and then on the View tab, selecting "Use 3D Hardware Acceleration." To turn off hardware acceleration, uncheck the option and restart the program.

Improving 3D View Speed

Rendering refers to the way LandDesigner 3D creates a three-dimensional effect on a 2D screen. Rendering requires a tradeoff between viewing quality and the speed with which LandDesigner 3D draws the 3D image.

During the basic design phase of your landscape, you might want to increase the drawing speed at the expense of image quality. You can then navigate through the 3D View more quickly, since LandDesigner 3D will require less time to generate the 3D scene.

Later, when you want to see all the materials and colors you've assigned, you can switch back to a better image quality and longer drawing time.

To control drawing speed and image quality:

1. Select Options from the Edit menu.
2. Click the View tab in the Options dialog box.
3. To change the rendering method, click one of the following Quality of Scene options:
    - **Full light, all materials.** This setting yields the highest-quality image, at the slowest drawing speed. This setting is good for viewing your finished design.
    - **Minimal light, all materials.** This intermediate setting provides a compromise between drawing speed and image quality.
    - **Full light, no materials.** Select this setting to increase drawing speed but decrease 3D image quality.

Note: You can also increase drawing speed by clicking the Draft Mode check box, which appears in the Mini View when you select the Design phase in the Step-by-step toolbar and then select Dynamic F/X.

Turning Off Layers

As your design becomes more complex, you might notice a decline in performance. The Visible Layers button in the Top View toolbar lets you turn off the display of many items in your design. For example, you might improve processing speed by turning off the display of plant foliage.

For more details on the Visible Layers options, see Using Layers in Chapter 2.

Solving Memory Problems

Because of LandDesigner 3D's rendering capabilities and other advanced features, the program might require more memory than some computers can provide. If your processor runs short of memory, you may notice these symptoms:

- Parts of LandDesigner 3D do not start or display.
- The display shows an inappropriate color scheme.
- Printouts appear as if created on a typewriter.
- LandDesigner 3D stops responding to all keyboard or mouse commands.

If you encounter such difficulties, try the following techniques to help overcome memory shortfalls:

- Close other applications while running LandDesigner 3D. Note that some programs may start automatically when you start Windows. You'll find these program icons in your Windows Startup group.
- Reboot your computer.
- Increase the amount of random access memory (RAM) in your system.

Introduction

to Sierra Home Architect

Sierra Home Architect consists of several products. You can install one of the programs separately or install all of them. The number of programs varies with the Home Architect package you purchased. The installation procedure is the same for each program.

System Requirements

To install and use programs in Sierra Home Architect, you need the following items:

- An IBM™ PC or compatible PC with at least a Pentium 133 processor. For better results, we recommend a Pentium 233 processor. The faster your processor, the faster the programs will run, especially in 3D View.
- Microsoft Windows™ 95, Windows™ 98 or Windows™ 2000.
- At least 16 MB of RAM (32 MB recommended). The more memory (RAM) you have, the better the programs will perform.
- 50 MB of available hard drive space for installation.
- SVGA color monitor with a minimum 16-bit graphics card. The screen resolution must be at least 800 X 600 pixels. A direct 3D compatible video card is recommended.
- 4X CD-ROM drive (8X drive recommended).
- A Windows™ compatible sound card. For the best sound, we recommend a 16-bit stereo Windows™ compatible sound card.
- Mouse and keyboard.
- An Internet connection (optional, but recommended).

Installation

To install a Sierra Home Architect product:

1. **Close any open applications on your computer.**
2. **Insert the Sierra Home Architect CD #1 or #2 into your CD-ROM drive.**

   The AutoPlay feature of Windows 95, Windows 98 or Windows™ 2000 displays an opening screen.
3. **Click the Install button next to the program you want to install.**

   To see a demonstration of a product, click one of the Demo buttons.
4. **Follow the instructions on your monitor to complete the installation.**

Click Next to move through the installation screens.

- By default, the program will be installed in a subdirectory within the C:\Sierra\ directory. To install the program elsewhere, click the Browse button and assign the new path.
- Fill out the personal information forms to become a registered user.

5. **When the Setup Complete window appears, click Finish.**

To start the program you installed:

- Click the Run button next to the program name in the Installation window.
- Click the Start button on the Windows 95, Windows 98 or Windows™ 2000 task bar. From the resulting menu, click Programs, then select Sierra. From the final menu, select the name of the program you installed.

Uninstalling a Program in Sierra Home Architect 3D Design

To remove Sierra Home Architect 3D Design from your hard drive, use the uninstall procedure. You have two options:

- Insert the Sierra Home Architect 3D Design CD into your CD-ROM drive. When the Sierra Home Architect 3D Design screen appears, click the Uninstall button beside the program you want to remove. Follow the instructions that appear on your monitor to uninstall the program.
- You can also uninstall the program by clicking the Start menu and selecting Settings. From the next menu, select Control Panel and then double-click the Add/Remove Programs icon. In the window that appears, select the program you want to remove and then click the Add/Remove button.

Getting Started

in Sierra Home Architect

Features of Sierra Home Architect

- Realistic 3D views and the 3D Walk & Fly Through feature let you walk and fly through and around your design.
- Quick & Easy Drag & Drop makes it easy for you to add rooms, walls, stairs, furniture, and other decorative elements to your design.
- The 2D Plan Tracer lets you start with an existing blueprint or a design you have drawn by hand.
- The Designer Rooms Library of sample rooms designed by professional interior designers can offer ideas to help you get started.
- The Design Guide offers tips on home construction, planning the rooms, selecting materials, and much more.
- The Shopping List & Cost Estimator estimates and tracks your costs automatically.
- The Email Home Designs feature lets you share your design with friends, family--even contractors.

Getting Started

To start Sierra Home Architect:

1. Click the Start button.
2. Point to Programs, then point to Sierra.
3. Point to Sierra Home Architect, then choose Sierra Home Architect from the Sierra Home Architect menu.

The following screen appears when you start Sierra Home Architect or when you select New from the File menu.

Welcome screen of Sierra Home Architect

4. **Click one of the four choices to use the following options.**

   If you're a new user, we recommend that you click Getting Started first, and let the Tutorial guide you.

   - **Start with a Blank Design.** If you prefer the do-it-yourself route, choose this option. Instructions for creating a new design in Layout Mode can be found in Chapter 3.
   - **Getting Started.** If you want to get right to work, but you are not sure how to proceed, choose this option to open the design window with the Tutorial.
   - **Designer Rooms Library.** Sierra Home Architect includes a large number of home and room plans and sample furnished rooms ranging from elegant kitchens to functional home offices. Select this option to select sample designs. Use these designs to get new ideas or as starting points for your own designs.
   - **Open Most Recent Design.** If you or someone else has already started a design in Sierra Home Architect, choose this option to open that design.

Exiting Sierra Home Architect

- To exit from Sierra Home Architect, click the File menu, then click Exit.

If you try to exit without saving your work, you are prompted to save the design first.

Learning the Tools

in Sierra Home Architect

Using the Tutorial

To use the Tutorial:

1. **Start Sierra Home Architect.**
2. **When the Welcome screen appears, choose Getting Started.**

   Select the topic you want to see from the Main Tutorial window. After you select a topic, this window will close and the topic you selected will appear in the window to the right of the work area.

   You can close the Tutorial at any time by clicking the Close button in the upper right corner of the Tutorial Contents window and the SHA Helper window. If you need to open the Tutorial again, click the Tutorial button to the right of the Design toolbar.

Looking at a Designer Room

The Designer Rooms Library shows what you can do with Sierra Home Architect. We recommend that you examine a few of the sample designs and room plans before creating your own. The designs include complete home plans, room plans, and sample rooms.

The sample floor plans for rooms and entire homes are based on designs from HomeStyles, Inc. They provide building plans for a fraction of the cost of an architect. If you like a plan you see, call them at 888-626-2026. Mention the plan number that appears below the sample description, and please tell them you saw it in Sierra Home Architect.

The sample rooms display interiors that have been carefully laid out and decorated with furniture and other décor.

To look at the Designer Rooms Library in Sierra Home Architect:

1. **Select Designer Rooms Library from the opening window that you see when Sierra Home Architect starts.**

   The Designer Rooms Library dialog box appears. If you are already in the program, you can select Open Designer Rooms Library from the File menu.

2. **From the file tree on the left side of the dialog box, click on the names of the different floor plans or style samples.**

   You can expand the file tree to see more designs or samples by clicking the plus symbols (+).

3. **When you see a style sample or a floor plan you like, click OK.**

   For this example, choose one of the dining room plans. Expand the House Plans folder, then expand the Dining Rooms folder. When you expand the Dining Room Plans section of the tree, a list of designs will appear.

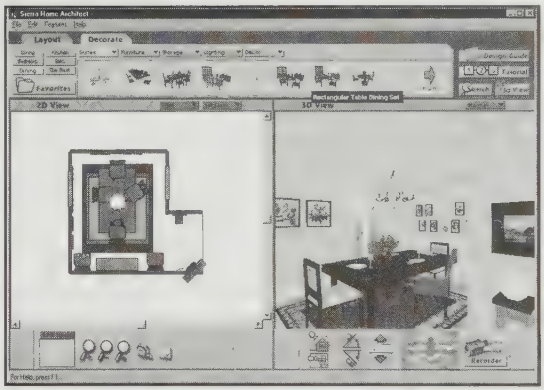
4. **Select one of the dining rooms in the list and then click OK.**

   After a short pause, the dining room appears in the 2D View and 3D View of the work area. The pause is longer on slower computers because the 3D View takes longer to render.

Navigating the Work Area

When Sierra Home Architect finishes rendering the sample design, you're ready to look at your work area. You create your design in this work area.

If you chose a dining room sample design as instructed in the previous procedure, your screen should look something like this:



Sierra Home Architect work area

The work area consists of the following elements:

- **The Design toolbar.** The Design toolbar displays most of the tools you use to create and edit your design. The Layout and Decorate toolbars are located here. Chapters 3 and 4 describe how to use the Design toolbar.
- **The 2D View** provides an aerial view of your design. Use the 2D View to create your floor plan and add furnishings and other materials.
- **The 3D View** shows the design in three dimensions. Use the Walkthrough tools to stroll around in your design and view it from any angle.
- **The Title bar** contains Show/Hide, Select/Add Floors, and Zoom.
- **The Menu bar** contains commands for using Sierra Home Architect. We describe menu options as needed throughout this manual.

Using the Toolbars

You control the 2D and 3D views by using the 2D/3D View button at the right end of the Design toolbar. To keep both the 2D and 3D window views open at the same time, click the 2D/3D View button and select 2D/3D. To maximize either view, select 2D or 3D, and the selected view will fill your screen.

The Layout Toolbar provides all of the components needed to complete your floor plan. See Chapter 12 for more information on using the Layout Toolbar.

Layout toolbar

Using the Decorate toolbar, you can add furnishings to your design. See Chapter 13 for details on using this toolbar.

Decorate toolbar

Moving Around in the 3D View

Use the 3D View to see a realistic rendering of your home design in three dimensions. You can use Sierra Home Architect's Walkthrough technology to move through the design and view the floor plan from all angles.

3D View toolbar

This section explains how to:

- Navigate the 3D view using the Walkthrough tools shown above.
- Change your view by moving the camera.
- Set the lighting and rendering quality in the 3D view.

Using the 3D View Toolbar

The 3D View toolbar is shown in the previous illustration. It is divided into five sets of tools for navigating the 3D View.

View. Click the two View icons to switch between an overhead view or an eye-level view.

Height. To adjust your viewing height, click the up and down arrows.

Move. Click a navigation arrow to move in the direction indicated by the arrow. Hold down the mouse button to continue the movement.

Tilt. Click the Tilt cameras to adjust your viewing angle.

Moving Around in 3D

You can change the 3D View in the following ways by dragging the mouse pointer. For best results, start dragging from the center of the 3D View.

- To move your perspective forward and "into" the image, click and hold down the mouse button in the top half of the 3D View and drag upward.
- To move your perspective farther back, click and hold in the bottom half of the 3D View and drag downward.
- To rotate your view to the right, click and hold in the right half of the 3D View and drag to the right.
- To rotate the view to the left, click and hold in the left half of the 3D View and drag to the left.
- To move horizontally in the 3D View, hold down SHIFT as you hold down the mouse button and drag to the right or left.
- To change your viewing height in the 3D View, hold down CTRL as you hold down the mouse button and drag up or down.

Note: The closer the pointer is to the center of the 3D View, the slower your movement. Dragging away from the center increases your speed.

Other 3D Control Tools

The **Zoom** button on the Title bar enables you to change your perspective to wide angle, normal, or telephoto.

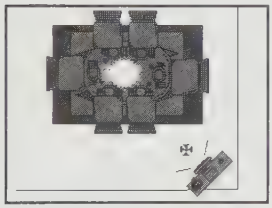
Using the Keyboard

Click the four arrow keys on the keyboard to move in small, precise increments in any of the four directions.

Moving the Camera

The camera in 2D View is often the best way to see what you want in the 3D View. While the tools in the previous section let you change your view gradually and incrementally, you can move your view to any part of the design by repositioning the camera.

The 3D view depends on the position and angle of the camera in the 2D View.



Camera in 2D View

To move the camera:

1. **Click the Camera icon.**

   When you click the camera icon, the word "Move" appears above the pointer.

2. **Drag the camera to the location you want to see in 3D View.**

   The 3D View adjusts after you move the camera.

   You can use the Zoom tools, represented by magnifying glasses, to see the camera better. Click the + Zoom tool in the 2D View toolbar to magnify the 2D View. If you zoom in, you may want to maximize the 2D View so you can see the entire floor plan. Click the View button in the top right corner of the screen and select 2D.

3. **To rotate the camera, move the pointer over the cross in front of the camera icon. When the word "Spin" appears, drag the cross to rotate the camera.**

4. **Click the View button, and select 3D for a full screen 3D view or the 2D/3D button for a split screen view.**

   The new camera position displays the new perspective in the 3D View.

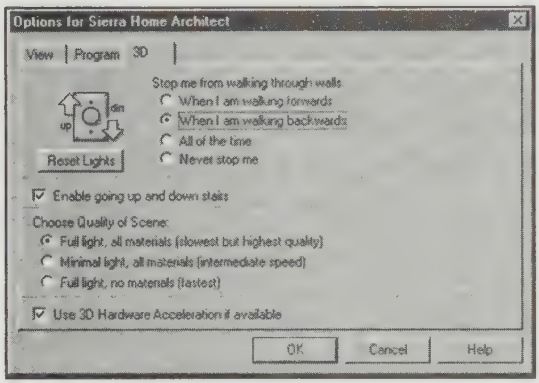
3D View Lighting and Rendering

You can also use the 3D View toolbar to set the lighting and rendering quality in the 3D View.

Rendering refers to the way Sierra Home Architect creates a three-dimensional effect on a 2D screen. In 3D View, rendering requires a tradeoff between image quality and the speed with which Sierra Home Architect creates the 3D image.

To change the lighting and rendering speed in the 3D View

1. From the Edit menu, select Options, then click the 3D tab to see the following options.



Options dialog box, 3D tab

2. To adjust the lighting, use the Reset Lights controls.

   Click the Up arrow to brighten the 3D view. Click the Dim arrow to make the view darker. These controls may help you see more details and colors in your design.

3. To change the drawing method, click one of the following Quality of Scene options:

   - **Full light, all materials**. Select this setting to see the highest-quality image, but at the slowest drawing speed.
   - **Minimal light, all materials**. This intermediate setting is a compromise between drawing speed and image quality. While you are moving in 3D View, no lighting effects are shown. When you stop, the lighting is turned back on.
   - **Full light, no materials**. Select this setting to increase Sierra Home Architect's rendering speed but decrease 3D image quality.

You now know the tools and can move around in Sierra Home Architect. You're ready to move on to creating your design and making the tools work for you.

Using the Layout Toolbar

With the Layout toolbar you can refine a design you selected from the Designer Rooms library or start from scratch by selecting and laying out room shapes.

Use the six main buttons on the Layout toolbar to:

- Choose and arrange your rooms
- Place doors
- Add windows
- Add stairways
- Complete your floor plan by selecting and defining parameters for other basic elements such as flooring, columns, roofing, and additional walls
- Use rectangular, circular, and triangular shapes to further customize your design

Using the 2D View Toolbar

When you have begun to lay out a floor plan, you use the tools on the 2D View toolbar to refine your design.

Edit Item. Click this button to open a room or object Spec Sheet. This is the equivalent of double-clicking an object or room. The picture below the Edit Item button displays what is selected.

Zoom. Click these tools to enlarge or reduce your view, or to resize your design to fit the 2D View window.

Tape Measure. Use the Tape Measure tool to measure the distance between any two points in the 2D View.

Notes. Use this tool to add text labels in 2D View. Click the label tool, then click in the 2D View to position the label. To edit the label, double-click and type new text in the window that appears. To move the label, drag it to a new location.

Choosing Rooms

Begin your floor plan by choosing your rooms. If you're designing your dream house, select the rooms you've always wanted. You can delete some later if necessary. If you're renovating or decorating your current home, choose the rooms in your house.

To choose rooms:

1. **Open Sierra Home Architect.**

   The Welcome screen appears when you start the program or when you select New from the File menu.

2. **On the Sierra Home Architect Welcome screen, choose "Start with a Blank Design."**

   The Design window appears. Select the Layout tab to display the Layout toolbar.

3. **Select your room shapes and drag them into 2D View.**

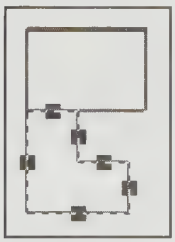
   Click the Rooms button to see the seven different shapes of rooms available. Room shape options are: cross-shaped, L-shaped, rectangular, T-shaped, U-shaped, Z-shaped, and backwards Z-shaped.

Room Shapes

If you need a unique room shape, you can create it by using the polygon floor and ceiling objects and by angling walls. Note that rooms created this way do not act like the other room shapes.

Arranging Rooms

When you have placed rooms into your workspace, you can move, rotate, and resize them.



Arranging room shapes

To move a room:

1. **Click anywhere inside the room to select it.**
2. **Drag the room to a new location.**

   Notice that rooms "snap" together as they near each other to ensure proper alignment.

To resize a room, you have two options. The first option—to use the stretch handles—is easier but less exact. The second option—entering dimensions in the Room Spec Sheet—enables you to enter precise measurements.

To resize a room using the stretch handles:

1. **Select the room to display its stretch handles.**
2. **Drag one of the stretch handles to resize the room.**

To resize a room using the Room Spec Sheet:

1. **Double-click the room.**

   The Room Spec Sheet appears.
2. **Select the Dimensions tab.**
3. **Select the wall you want to resize, and enter the new dimensions in the Height and Length boxes.**

   You can select a wall either by selecting it from the pull down menu in the Wall list or by clicking the wall in the graphic of the room.
4. **Repeat this step for each side until the room equals the desired dimensions.**
5. **Rotate a room by clicking the arrow buttons to the right of the graphic.**

   On the Dimensions tab of the Spec Sheet, click the arrows to rotate the room to your preferred orientation. One click rotates the room ninety degrees.

   Other Options:

   - To delete a room, select it and press DELETE.
   - Click the + Zoom tool on the Title bar to magnify the 2D View and examine a room more closely.
   - Use the Tape Measure tool to measure the dimensions of your floor plan. Click the Tape Measure tool icon to select it, and then drag from one point on your floor plan to another to measure.

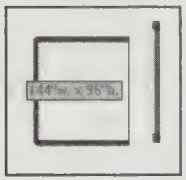
Adding and Moving Walls

To add walls to your design:

1. **On the Layout tab, click the Basics button.**

   Buttons containing menus listing categories of basic items, such as walls, flooring, and ceiling, are displayed across the top of the tab.

2. **Click the Walls button. Drag the wall thumbnail that you want into the 2D View window.**
3. **Drag the wall to the correct position and adjust the length.**



Once you connect walls, the corners snap together and generally stay snapped when you drag adjacent walls.

You can also move a wall by selecting it and dragging it.

Snap Options

To ensure that walls join when they are brought close together at corners and T-junctions, the Wall Snap option is turned on by default. By default, walls snap together when they are within one foot of each other.

To control the responsiveness of Wall Snap, select Options from the Edit menu. In the Options dialog box, click the View tab, enter a new snap distance in the Wall-To-Wall Snap field, and click OK.

Adding Doors

Few decisions affect circulation as much as door placement. Consider doorways between the main living areas of your home and solid doors for rooms such as offices, bedrooms, and laundries.

To add doors to your design:

1. **On the Layout tab, click the Doors button.**

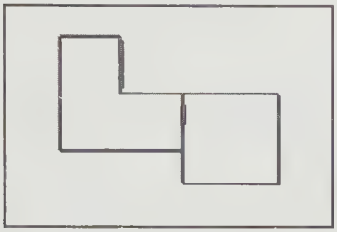
   Buttons that contain menus listing categories of doors are displayed across the top of the tab. Sample doors from the first menu are displayed on the tab.

2. **Select the category of doors you want.**

   Sample doors from the category you selected are displayed. If there are more doors than can fit onto the toolbar, you can click the right-facing blue arrow to see them.

3. **Drag a door icon into your design in 2D View.**

   When you add a door, the room shape might resemble the following illustration.



Room shapes with doors

   You can change the door's location in 2D View by dragging it along walls and around corners.

4. **Repeat steps 2 and 3 for each door you want to add.**
5. **Double-click a door to change the door materials.**

   A Door Spec Sheet appears. In this area you can edit materials for door panels and trim. Door dimensions, knobs, and other information is displayed on the Details tab.

Adding Windows

There are many options that will bring more light into your home. Basic styles include casement, awning, doublehung, jalousied, and sliding windows as well as the increasingly popular vinyl windows.

To add windows to your design:

1. **On the Layout tab, click the Windows button**

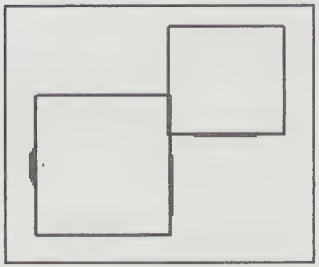
   Buttons that contain menus listing categories of windows are displayed across the top of the tab. Sample windows from the first menu are displayed on the tab.

2. **Select the category of windows you want.**

   Sample windows from the category you selected are displayed. If there are more windows than can fit onto the toolbar, you can click the right-facing blue arrow to see them.

3. **Drag a window icon into your design in the 2D View.**

   When you add a window, the room shape might resemble the following illustration.



Room shapes with windows

You can change a window's location by dragging it along walls and around corners.

4. **Repeat steps 2 and 3 for each window you want to add.**
5. **Double-click a window to change its size and materials.**

   A Window Spec Sheet appears. In this area you can edit materials for the window's trim, sash, casement, and glass. You can change window dimensions on the Details tab.

Adding Closets

Closets require a little planning. You create the room first, leaving a space for the closet. Then you attach the closet to the outside of the room where you have left the space. You should add the closet before you add adjoining rooms.

1. **Click the Rooms button on the Layout tab.**
2. **Choose the shape of the room without the closet.**
3. **Drag the room shape into 2D View, then resize and rotate the room as explained in Arranging Rooms.**

   You can open the room Spec Sheet to size the room exactly how you want it.
4. **Drag a rectangular room into 2D View.**
5. **Resize the rectangular room to the dimensions of the closet, then place the closet onto the outside of the room where you want it.**
6. **Add a door.**

   See *Adding Doors* earlier in this chapter for more information.

Adding Stories

If you're designing a home with multiple stories, you can add a basement, second story, and third story.

To add a floor:

1. **Click the Select/Add Floor button on the Title bar, and select Add Floors.**

2. **Select the check box for each floor you want to add. Click Add to complete the process.**

   Each floor you select will be added, but will initially appear invisible until you add rooms. The first floor will be visible as a gray outline. Rooms on the upper story snap to the floor below. To jump between floors, click the Select/Add Floor button on the Title bar and select the floor you want.

Tip: Before you build the rooms on an additional story, we recommend you position the stairs.

To add stairs to your design:

1. **On the Layout tab, click the Stairs button.**

   Various staircase styles appear on the tab. To see a description of a staircase, move the mouse pointer over the icon. Some models are modern, "open riser" staircases. The more traditional, closed stairwells have white backgrounds.

2. **Drag a staircase into the first floor in 2D View, then position the staircase where you want it.**
3. **Double-click the stairs to open their Spec Sheet, and make any necessary revisions.**

   On the Details tab of the Spec Sheet there are check boxes that let you show or hide the left and right handrails and balusters (the vertical posts on the sides). Most traditional staircases abut a wall, so you can use the check boxes to remove the handrails and balusters from the wall side.

Starting a Design with the 2D Plan Tracer

If you have an existing blueprint of your home, or you have already created a design by hand, you can import your design into Sierra Home Architect and trace over the design with Sierra Home Architect tools.

To trace a floor plan over an imported image:

1. **Using a scanner and scanner software, scan the blueprint or design and create a graphics file.**

   Bitmap (.bmp), Graphics Interchange (.gif), JPEG (.jpg), and Portable Network Graphic (.png) formats all work.

2. **On the Features menu, point to 2D Plan Tracer, then select Load.**
3. **Browse for the scanned image you want to import into Sierra Home Architect.**
4. **When you have found the image you want, click OK. The image appears in the 2D window.**
5. **If the image is too small, you can resize it. On the Features menu, point to 2D Plan Tracer, then choose Select Image. Use the resize handles that appear around the image to make the image larger.**

Depending on the image, you may need to hold down SHIFT to resize the image proportionately. Otherwise the image is resized only in the direction you drag. Other images require you to hold down SHIFT to resize the image disproportionately. Experiment with your image to determine how to resize it.

6. **If you want to turn the image, drag the image's spin handle in the direction you want to turn the image.**
7. **Select rooms from the Layout tab that resemble the rooms in the scanned image, and place the rooms over the image.**
8. **You can hide the scanned image when you no longer need it. On the Features menu, point to 2D Plan Tracer, then select Make Invisible.**

Saving Your Plan as a Template

If you want to save your floor plan as a template for future home designs, you can do so.

To save a plan as a template:

1. **From the File menu, select Save as Sample.**
2. **In the dialog box, enter a name and description for the template and click OK.**

   The floor plan you designed is now available when you select Open Designer Room Library from the File menu and select the My Samples folder. Any changes you make or furnishings and décor you add later in the Designer are not saved with the template.

To delete a template:

1. **Close the template that you plan to delete.**
2. **In the C:\Sierra\SHA\template directory, find the file called Personal.3tl.**
3. **Open the file with any Windows word processor or with a text editor such as WordPad or Write.**

   Each sample template begins with "My Samples" and is followed by the name you assigned.
4. **Delete the line for each template you want to remove.**

You're ready to use the Decorate Mode to finish your home plan. The next chapter explains how to add furniture, decorations, and other materials.

Adding Furnishings

Once you've finished your basic floor plan, the next major step is to add furnishings. Use the Decorate toolbar to view your options for furnishings. Drag your selections into the 2D View window and position your selection. Refine the appearance of your furniture by changing the materials.

Using the Decorate Toolbar

Adding furniture in Sierra Home Architect requires a few mouse clicks.

To add furniture using the Decorate Mode toolbar:

1. **Click the Decorate tab.**

   Room categories are shown as buttons on the left side of the toolbar.

Decorate Toolbar

2. **Click the button for the kind of room you want to furnish, such as Living, Kitchen, or Bedroom.**

   Buttons that contain menus listing categories of furnishings are displayed across the Decorate toolbar. The Rest button contains furnishings that don't fall within the other room categories.

   For this example, click the Living button.

3. **Select the category of living room décor you want to add.**

   - For example, if you click the Furniture button, a list of categories, such as Armchairs appears.
   - To switch to a different menu, click another button on the toolbar, such as Recreation or Lighting. Pick a category from the list that appears.

   A brief description of the object and its size appears when you hold the mouse pointer over the icon. Look through all the categories to become familiar with the organization. If you don't see what you want, search for your object by clicking the Search button. For more information on using the Search button, see *Finding the Right Objects* in Chapter 14.

4. **When you find the item you want for your living room, drag the icon into the 2D View.**

   You can also place the object in the 2D View by clicking once on the object and then clicking once inside the living room in the 2D View.

5. **When the furniture is in 2D View, position it properly.**

   For details, see the next section, *Positioning Objects*.

Adding Furniture Suites

Pre-assembled furniture suites are available to quickly decorate a living room, bedroom, bathroom, and kitchen.

To add a furniture suite to your design:

1. **From the Decorate toolbar, select the room you want to furnish. Choose from the selections listed under Suites.**
2. **Drag the icon into the 2D View window for placement.**
3. **If you want to rearrange the pieces of furniture in the suite, right-click on the suite and select Ungroup Objects.**

   You can now move the objects in the suite separately.

Positioning Objects

You use the 2D View to reposition and resize objects. You use the 3D View to see the effects of your work. To see your changes in 3D View as you work in 2D View, adjust the camera so that it points towards the object you are working on. For more details, see Moving the Camera in Chapter 11.

Elevation of Dropped Objects

Each object you drop into 2D View is assigned a logical elevation, or height above floor. Sierra Home Architect automatically places many objects on the floor, but there are exceptions. A vase drops to a table, for example.

If necessary, you can revise an object's elevation. For details, see Positioning Decorations and Accessories later in this chapter.

Moving Objects with the Mouse

To move an object to a new location in 2D View, select the object and drag it to where you want it.

If you have trouble selecting an object because it is underneath another object, right-click the object. On the shortcut menu that appears, point to Select Object, then select the object you want from the sub-menu. You can use the arrow keys on the keyboard to move the selected object from underneath other objects.

When you move an object, Sierra Home Architect calculates whether the object should "snap" to other objects, such as walls. Doors, windows, cabinets, wall art, and mirrors are examples of objects that snap to walls.

If you don't want objects to snap automatically, select Options from the Edit menu, click the View tab, and clear General Snap.

Moving Multiple Objects

To move multiple objects at one time, hold down SHIFT and click on each object you want to move. When all the objects are selected, release SHIFT. Next, click one object in the group to drag the group to the new location. All the selected objects will move.

When you are in Layout mode (Layout tab selected), you can move a room and all the objects in it by dragging an empty area of the room. All objects in the room, with the exception of some manually created walls, move with the room. When moving a room, make sure you click an empty area. If you click an object and then drag, only the selected object moves.

Moving Objects with Precision

Using the mouse is the easiest way to move objects, but it isn't the most exact. Sierra Home Architect gives you several ways to move objects precisely.

Moving Objects an Exact Distance

By pressing the arrow keys on your keyboard, you can incrementally move a selected object up, down, left, or right. Repeat the commands as many times as necessary to move the selected object.

Changing an Object's Size

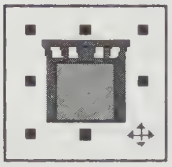
Sometimes objects look too big, or not big enough, for the room. In such cases you can easily change the object's size.

If you want to adjust the size of an object, you must first clear the Lock Size check box and the Lock Size and Location check box found on the Details tab of the object's Spec Sheet. For more information on locking, see Locking an Object's Size and Location.

To change an object's size:

1. **Click once on the object to select it in 2D View.**

   The boxes that appear around the object are stretch handles.



2. **Hold the mouse pointer over a stretch handle until the resize pointer (four arrows) appears, then drag the pointer to change the object's size.**

   To increase the object's size, drag away from the object. To reduce the object's size, drag toward the center of the object.

3. **To change an object's size using precise dimensions, double-click it.**

   The object's Spec Sheet opens.

4. **Click the Details tab.**
5. **Set the object's dimensions by entering values in the Width, Depth, and Height fields.**
6. **To return the object to its original dimensions, click the Reset Size button.**
7. **Click OK to close the Spec Sheet and return to the Design window.**

Rotating Objects

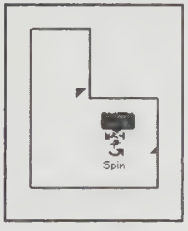
If an object is in the right location but the angle is wrong, you can rotate it.

To rotate an object:

1. **Click once on the object to select it in 2D View.**

   The cross that appears at the front of the object is called a spin handle.

2. **Hold the mouse pointer over the spin handle until the word "Spin" appears, then drag the spin handle to rotate the object.**



Locking an Object's Size and Location

When you are satisfied with the size and location of an object, you can lock its settings to make sure they aren't changed accidentally.

To lock an object's size and location:

1. **Double-click the object to open its Spec Sheet, and select the Details tab.**
2. **To lock the object's size, select Lock Size.**
3. **To lock the object's size and location, select Lock Size and Location.**
4. **Click OK to close the Spec Sheet and return to the Design window.**

Deleting an Object

You have the following options for deleting objects:

- To delete a single object, click it and then press DELETE. You can also select Delete from the Edit Menu.
- To delete multiple objects, hold down SHIFT, click each object you want to delete, and then press DELETE.
- To delete an entire room and its contents, select the Layout tab, click an empty area of the room's floor to select the room, and then press DELETE.
- To delete all objects from 2D View, select the Delete All command from the Edit Menu.

Note: If you make a mistake while resizing or repositioning an object, you can undo the previous action by selecting Undo from the Edit menu.

Adding Colors and Textures

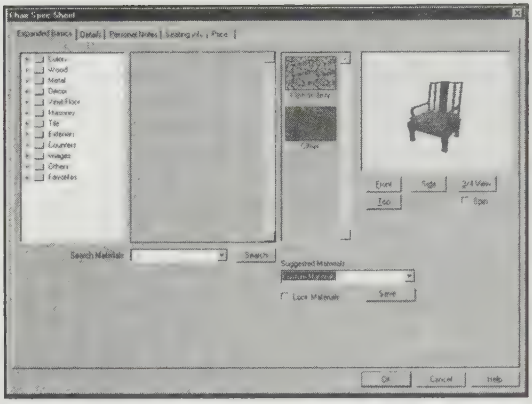
You've seen that Spec Sheets can help you resize objects or lock their position and size. The Spec Sheet also lets you assign distinctive colors, textures, and styles to your furnishings. You can change these materials at any time in the design process. If you move furnishings after applying materials, the materials move with the furnishings.

To add materials to furnishings in Decorate Mode:

1. **In 2D View, double-click the furnishing whose style you want to edit.**

   The object's Spec Sheet opens. The Material Picker tab displays panels for each material assigned to different parts of the furniture. For example, a sofa might have a panel for upholstery, one for throw pillows, and one for the feet.

   To change materials of furniture suites, first ungroup the suite. Right-click the suite in 2D View and select Ungroup Objects from the shortcut menu. You can then edit each item individually.



Object Spec Sheet

2. **Use the following options to find the material you want:**
    - The tree to the left of the panels contains the categories of materials. Categories include Colors, Wood, Metal, Décor, Vinyl Floor, Masonry, Tile, Exteriors, Counters, Images, Others, and Custom Materials.
    - To view material subcategories, expand the tree for each category. For example, if you click the plus (+) next to the category Décor, you will see sub-categories such as Natural Fabric, Floral, Striped, and Plaid.
    - Click a category folder to display panels with sample décor. Scroll through the displayed panels to look at your choices.
    - Place your mouse pointer on a material to see a quick description of it.
    - To select popular material combinations, click the pull down menu in the Suggested Materials field and choose from the options.
    - To find a specific material, enter the text of the material you're looking for in the Search Materials field and click the Search button. Search results are displayed in the panels. If the scope of your search is too broad or too narrow, the feature will prompt you to redefine your search. Previous searches are stored and can be accessed by clicking the down arrow in the Search Materials field.
3. **When you find a material you want, drag its panel to the panel representing the furniture area you want to change.**
4. **Click OK to close the Spec Sheet and save your materials changes.**

Time-Saving Tips for Colors and Textures

The Room Spec Sheet has two ways to quickly decorate entire rooms.

Sierra Home Architect has several tools that let you quickly assign colors and textures. Two of these tools let you address the styles of entire rooms, not individual objects.

- **Save the styles in a room.** If you like the colors and textures you've assigned to a room, you can save them as a set for use in future room designs.

  Double-click an empty area of the room to open the room's Spec Sheet, then click the Save This Room Style button. In the dialog box, assign a name and description to the style. You can select the style again in future designs by selecting the style from the My Room Styles list in the Room Spec Sheet.
- **Apply Sample Styles to a room.** Select a sample from the Sample Styles list in the Room Spec Sheet to assign a predefined style to your room, such as Art Deco or Neoclassical. These room styles were selected by professional designers.

Adding Decorations and Accessories

Once you finish adding the main furnishings, you can add decorative elements such as books, picture frames, and throw pillows.

Note: Don't add decorations until after the major furnishings are in place and are the right size. You can thus experiment freely with room arrangements without having to reposition every small object.

Decorative items are available from the menus in the Decorate toolbar, just like larger furnishings. For details on adding objects to your design, see Adding Furnishings earlier in this chapter.

Positioning Decorations and Accessories

When positioning smaller objects, you use many of the same tools as for larger furnishings. For details on these tools, see Positioning Objects earlier in this chapter.

Sierra Home Architect has slightly different rules for smaller items, since smaller items can be a bit trickier to place. Smaller items are intended to rest on other objects, such as tables and sofas, so their Above Floor value is different from that used for furniture, which rests directly on the floor. Use the Spec Sheet to reposition smaller objects.

- Drag a small object into 2D View, as you do with larger furniture.
- Double-click an object to open its Spec Sheet and change the object's Above Floor value. If the object is too small to see in 2D View, you can use the Zoom tool to magnify your view.

The rest of this section describes your options in more detail.

Tip: If you need help selecting smaller objects when they are positioned below larger ones, right-click the larger object. Choose Select Object from the shortcut menu and then select the smaller object's name from the sub-menu.

Placing Smaller Items on Larger Furnishings

If you position a smaller item in the 2D View on a larger furnishing, the smaller item will "fall" nicely onto the object below. Sierra Home Architect uses this logic, for example, to place books on a table, or pillows on a sofa.

However, if you then change the height of the table or sofa, the height of the smaller items will not change. Your books, for example, might be sliced by the table. To fix this problem, change the Above Floor value of the smaller item. The Above Floor represents the bottom of the object.

To change an item's above floor value:

1. **Double-click the item to open its Spec Sheet.**
2. **Select the Details tab.**
3. **Enter a new Above Floor value so the bottom of the object rests on top of the larger furnishing.**

   For example, to make books appear to rest properly on a resized table, change the books' Above Floor value to equal the new height of the table.
4. **Click OK to close the Spec Sheet and see the results in the 3D window.**

   You might have to experiment with the Above Floor setting until the smaller item appears to rest on the larger one.

Improving the Appearance of Hanging Items

Sometimes objects that hang on walls are difficult to see because they blend in with the wall. You have a couple of options for making these stand out:

- Try making the picture frame, mirror, or other hanging item slightly thicker than it would be in real life. To make an item thicker, increase its Depth setting in the Spec Sheet.
- Turn off the snap feature for the object and then position the item slightly away from the wall. To turn off snap in Sierra Home Architect, select Options from the Edit menu, click the View tab, and clear General Snap.

Saving Your Design

When you reach a stopping point in your design, you can save it for later use. It's a good idea to save your design regularly once you know you want to keep it.

To save your design in Sierra Home Architect:

1. From the File menu, select Save.
2. In the Save window that appears, enter a name for your design in the File Name field.
3. If necessary, assign the design file to another directory on your drive.

   Use the navigational controls in the Save window to change directories. See your Windows manuals if you need more information.

   By default, your design files are saved to the C:\Sierra\SHA\Designs file.. Sierra Home Architect gives the file a .bvh extension.
4. Click Save to save the design file.

Note: If you try to exit Sierra Home Architect without saving your work, you are prompted to save the design first.

Sierra Home Architect contains an Auto Save feature. The Auto Save is set to prompt you to save your design every 15 minutes. If you want to change the interval between saves, or if you want to turn off Auto Save, you can do so in the Options dialog box.

To adjust Auto Save options:

1. From the Edit menu, select Options.
2. Select the Program tab.
3. Turn Auto Save on or off by selecting or clearing the Auto Save check box.
4. Adjust the Auto Save interval by entering the number of minutes.

Sharing Your Design

You have four methods available to share your designs: printing, exporting, emailing, or sharing through the internet using an IP address. This section explains each option.

Note: You can also use the Recorder Control feature to show snapshots and animated Walkthrough tours of your design to other people. For more details, see Recording Walkthroughs and snapshots in Chapter 14.

Printing Your Design

Sierra Home Architect enables you to print your design in 2D View or 3D View.

To print your design in 2D:

1. First, check your settings by selecting Print Setup from the File menu.

   In the Print Setup dialog box, you can specify a printer, paper orientation (landscape or portrait), and the type of paper to use. Click the Properties or Options button to select advanced printing settings.

2. **Select Print 2D from the File menu.**

   Your design will appear in the Preview window.
3. **Select the desired scale for your printout.**
4. **Enter a title, if desired. Click OK.**
5. **To print the design, select Print from the Print Preview window.**

To print your design in 3D:

1. **Check your settings by selecting Print Setup from the File menu.**

   In the resulting window, you can specify a printer, paper orientation (landscape or portrait), and the type of paper to use. Click the Properties or Options button to select advanced printing settings.
2. **Select Print 3D from the File menu.**

   Your design will appear in the Preview window.
3. **Press the Print button.**

Exporting Your Design

If you want to incorporate your design into another document, use the Export feature. You can export files in bitmap (bmp) and drawing exchange format (dxf). You can then bring the bitmap into a graphics or word processing program or import the drawing exchange format file into an AutoCAD program.

To export your design as a bitmap:

1. **From the File menu, select Export.**
2. **Choose the Bitmap option.**
3. **In the Save window that appears, enter a name for the file in the File Name field.**
4. **If necessary, assign the file to another directory.**

   Use the navigational controls in the Save window to change directories on your drive. See your Windows manual if you need more information. By default, the file is saved to the C:\Sierra\SHA directory.
5. **In the Save as Type field, select type of bitmap image.**

   Choose a 32-bit or 8-bit image.
6. **Click Save to save the file.**
7. **Import the bitmap into a graphics program or word processor.**

   If you need help with this step, see the instructions for the graphics program.
8. **Resize and revise the exported image as needed.**

To export your design as a DXF file:

1. **Select Export from the File menu.**
2. **Choose the 2D DXF or 3D DXF option.**
3. **In the save window that appears, enter a name for the file in the File Name field.**
4. **If necessary, assign the file to another directory.**

   Use the navigational controls in the Save window to change directories on your drive. See your Windows manuals if you need more information. By default, the file is saved to the C:\Sierra\SHA directory.
5. **Click Save to save the file.**

   In the Save as Type field, your image will be saved as an AutoCAD file.

E-mailing Your Design

You can e-mail your design to others who have Sierra Home Architect. Before you try this feature, make sure that you are connected to the web.

To e-mail your design:

1. **Open your design file in Sierra Home Architect.**
2. **From the File menu, select Mail This Design.**

   Sierra Home Architect will do one of two things, depending on what e-mail application you have. Either your normal e-mail dialog box opens, or a Sierra Home Architect e-mail dialog box opens.
3. **If the Sierra Home Architect dialog box opens, enter appropriate information in each required field and click Send. If your normal e-mail dialog box opens, complete it and send it as you normally do.**

   Your design is sent with the e-mail as an attachment. It appears in the e-mail text window as a .bvh icon.

Sharing Your Design over the Internet

If you have a Pentium Processor with MMX or equivalent capability, you can use Sierra Home Architect's Design Sharing feature to show another user your designs over an IP (Internet Protocol) network. Note that both you and the sender/recipient of the design need to be connected to the internet and have Sierra Home Architect running on your computers.

While your computers are connected, the sender's Sierra Home Architect display appears on the recipient's screen. You can even play a saved Walkthrough for the recipient.

To send your design to another machine:

1. On the Features menu, point to Recorder Control, then select Virtual Tour.
2. In the Recorder Options dialog box, type in the IP address of the recipient and click Connect.

   This action connects you to the recipient's machine. Your display will appear on the second machine.
3. Take the recipient on a Walkthrough of your design by navigating in 3D View.
4. Click the button labeled "Let the Other Guy Drive!" to allow the recipient to control the 3D View controls.

To receive a design from another machine:

1. On the Features menu, point to Recorder Control, then select Virtual Tour.
2. Click View A Design in the Virtual Tour dialog box.

   Your IP address will be displayed.
3. Give your IP address to the sender.

   Once the sender installs your IP address, the sender's design will appear on your screen.

Finding the Right Objects

If you can't find an object or material you need, you can search for it in Sierra Home Architect or on the Internet.

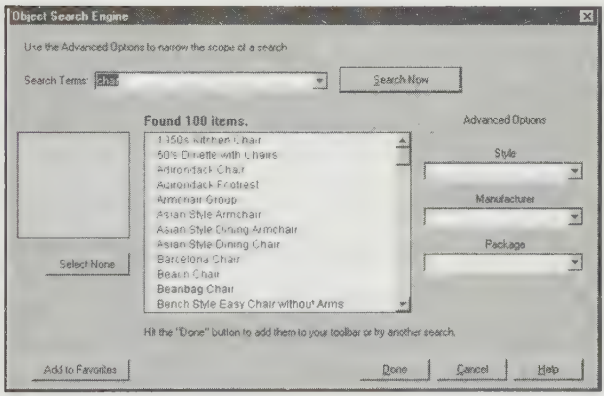
Searching for Objects

Sierra Home Architect lets you search for objects you can't find immediately in the Layout or Decorate toolbars.

To locate an object you can't find:

1. Click the Search button on the Design toolbar.

   The Object Search Engine appears.



Object Search Engine

2. In the Search Terms field, type the object of your search.
3. If you want, you can narrow your search by specifying a style and manufacturer in the appropriate fields under Advanced Options.
4. Click Search Now.

   The results of the search are displayed in the list.
5. View an object by selecting it in the list.
6. If you want to add one or more of the search results to your favorites, select the check box next to any objects you want save, then click the Add To Favorites button.

If you want to select all the objects, click the Select All button. If you want to save a selected object to your favorites, click the Add to Favorites button.

7. **Click Done when finished.**

Storing Favorite Objects

When you find an object you'd like to refer to easily, Sierra Home Architect makes it easy to store the object.

To store favorite objects from the toolbar or in 2D View:

- Drag the object from the toolbar to the Favorites folder.

The object is saved in Favorites.

To display your favorite objects:

1. **Click the Favorites button at the left end of the Design toolbar.**

   Objects you have placed into Favorites are displayed on the Design toolbar.

2. **Drag the object you want into your design.**

   You can sort your favorites alphabetically by name, by date added, by usage, or you can create your own sorting criteria.

Creating Custom Objects

You can create 3D custom objects and 2D custom objects. The 2D custom objects are like cardboard stand-ups that always face you.

To create 3D custom objects:

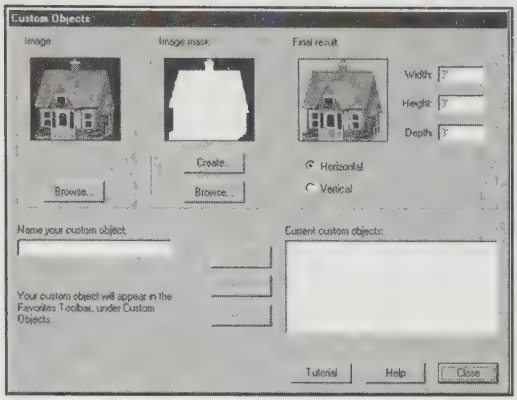
1. **Select the Layout toolbar and click the Shapes button.**
2. **Choose from the available objects on the Shapes menus.**
3. **Stretch these shapes in the 2D View window or create new ones by combining shapes.**
4. **Once you have created and refined a custom object, you can copy it.**
5. **To copy an object, select it and choose Copy from the Edit menu. Next, select Paste from the Edit menu to make the copy appear.**

To add your own 2D object:

1. **If you're creating an object from a photo, you first need to scan the photo, then create a bitmap file (bmp) from the scanned image using a graphics processing software program.**

2. **From the Features menu, select Add Your Own Objects.**

   The Custom Objects dialog box appears.



Custom Objects dialog box

3. **Browse for the photo you want to import.**
4. **Add the mask to your photo.**

   You have two options for the mask. You can either use a mask previously created through an image processing software you may have (such as PhotoShop) or create a mask with Sierra Home Architect.

   Note: For more information on masking photos, see Sierra Home Architect's online Help.
5. **Enter the dimensions for your object.**
6. **Choose between vertical or horizontal orientation.**
7. **Click the Create button to complete the process.**

   Your object can be accessed through the Decorate toolbar by clicking The Rest button and then clicking Home Life.

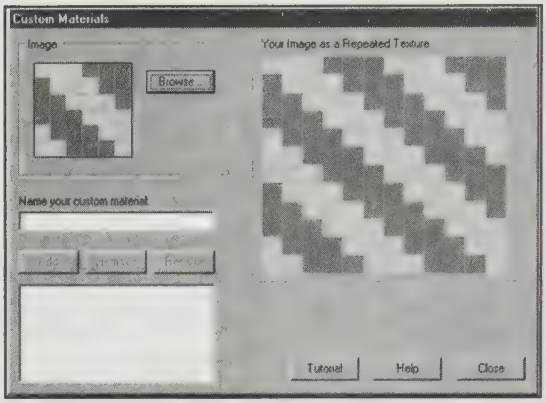
Adding Your Own Custom Materials

If you'd like to customize your décor, you may import graphics as bitmapped images to use as materials in your design.

To create a material:

1. **From the Features menu, select Add Your Own Materials.**

   The Custom Materials dialog box appears.



Custom Materials dialog box

2. **In the Image frame, browse for the bitmapped image you want to import.**
3. **View your image as a repeating pattern.**
4. **If you're satisfied with your results, enter a name for your new material in the Name Your Custom Material field and click Add.**

   Your new material appears in the list below the Add button. You can find your new material in the Material Picker. In the file tree on the left side of the Material Picker, look in Favorites, then Custom Materials.

To paint your own material:

1. **From the Features menu, select Material Painter.**

   The Material Painter window appears.

2. **Choose a material you want to paint and click the Next button.**

   The Material Painter displays the pattern you have chosen and panels containing the colors found in the pattern.

   The Material Painter displays the pattern you have chosen and panels containing the colors found in the pattern.

Material Painter dialog box

3. Enter a name for the new material in the Enter A Name For Your Material field.
4. Click a panel containing a color you want to edit.

   The Color dialog box appears.
5. Choose from the panels in the Basic Colors on the left or create a custom color by clicking within the color spectrum until you achieve the correct hue.
6. Click the Add to Custom Colors button to save your custom color.
7. Select your new color panel and click OK.
8. Click Finish to complete the process.

   You can find your new material in the Material Picker. In the tree on the left side of the Material Picker, look under Favorites, then Custom Materials.

Adding a Roof

Roofs help add realism to your home design, although they're not necessary if you're only interested in interiors.

Sierra Home Architect provides three main styles of roofs: hip, shed, and gable. The hip roof is the only style that is compatible with any shaped floor plan. The gable and shed styles work solely with rectangle floor plans. You may combine styles to obtain your desired roof effect.

To add a roof to your design:

1. Select the Layout tab.
2. Click the Select/Add Floor button on the Title bar and select Roof.
3. Click the Basics button.
4. Click the Roofing button, and select Roofing from the menu.
5. Drag a roof icon into the 2D View window.
6. In 2D View, drag the roof stretch handles to reshape the roof and cover your house.

   If you have selected the Automatic Hip Roof, the roof will size itself.
7. To change the roofing material, double-click the roof in 2D View to open the roof Spec Sheet.
8. In the file tree, expand Exteriors and click Roofing. Drag your choice into the panel that represents the area of the roof you want to change.
9. To change the roof's pitch, click the Details tab in the roof Spec Sheet.

   You can select from a range of 1 (shallow) to 15 (steep). Also, adjust the overhang for gable and shed roofs here.
10. Click OK to close the Spec Sheet.

Adding Multi-Story Roofs

If your design calls for roofing elements on more than one story, the roof for the top story should be placed on the roof layer and other roof elements should be placed on the floor above the rooms you want to cover, not on the same floor.

For example, if you have a 2-story design where half of the garage has a gable roof and the other half has a second story over it, you would place the garage roof on the second floor layer and the roof for the second story on the roof layer.

Adding Dormers and Chimneys

You can add dormers and chimneys to your roof based on the roof pitch you select. The dormers are named according to the slope they fit. For example, gable dormer for steep roof matches the steep roof pitch.

You add dormers and chimneys from the Design toolbar, just like any other design element. To see the available dormers, click the Layout tab on the Design toolbar, click the Basics button, click Roofing, and then select Dormer Windows from the menu.

To see the chimneys you can select, click the Layout tab on the Design toolbar, click the Basics button, click Roofing, and then select Chimneys from the menu.

To raise or lower a dormer or chimney, or the roof itself, double-click it to open its Spec Sheet and click the Expanded Basics tab. Next, enter a new height value in the Above Floor field in the Size and Location frame. Click OK to close the Spec Sheet and view the revisions.

Hiding the Finished Roof

To view and edit the rooms covered by your roof, you can temporarily remove the roof from the display. Select Roof from the Hide menu on the Title bar. You can also select Options from the Edit menu, select the View tab, and then select the Transparent Roof check box.

Setting Dimensions

You have several tools for viewing and marking the dimensions of objects and rooms in Sierra Home Architect. These tools are described as needed throughout the manual and are summarized here.

Tape Measure Tool

The Tape Measure tool on the 2D View toolbar lets you measure the distance between any two points in the 2D View. Click the Tape Measure tool, then click in the 2D View where you want to start the measurement. Drag to the other endpoint of the measurement.

A dashed line indicates the measurement in progress. Release the mouse to complete the line and display its length in 2D View.

You have the following options for revising a measurement:

- To move the measurement in 2D View, drag it by its label.
- To resize the measurement, first click the measurement's label to display the measurement's endpoints, then drag either endpoint.
- To delete the measurement, click its label, and then press DELETE.
- To format a measurement, double-click the measurement label. In the Text And Background Properties dialog box, you can select font, background, and other effects.

Changing Standard to Metric Units

By default, Sierra Home Architect uses standard units to display dimensions. To switch to metric units, select Options from the Edit menu, click the View tab, and select Display Metric Units.

To switch back to standard units, clear the Display Metric Units check box.

Recording Walkthroughs and Snapshots

You can save your favorite views and Walkthrough tours in each design. You can then view these snapshots and animated tours at any time. Walkthroughs and snapshots let you quickly communicate your ideas with architects, contractors, and designers.

Recording a Walkthrough

A recorded Walkthrough is an animated, 3D tour of your design in Sierra Home Architect.

To record a Walkthrough:

1. **Position the camera in 2D View where you want to begin your Walkthrough.**

   You can further adjust this beginning view by using the navigation arrows in the 3D View toolbar. See Chapter 11 for more details on moving the camera and navigating the 3D View.

2. **On the Features menu, point to Recorder Control, then select Walkthroughs.**

   The Recorder Options window appears.

3. **Click Record to begin recording the Walkthrough.**

4. **Navigate through your 3D scene along the path you want to record.**

   The recorder stores all of your movements as well as their speed.

5. **Click Stop to end the Walkthrough recording.**

   The Stop button is available only while you are running the Recorder Control.

6. **Type a name for your Walkthrough in the Name field.**

   If you don't want to name the Walkthrough, you can use the generic name Sierra Home Architect assigns automatically.

7. **To save the recorded Walkthrough as an .avi video file, click Save.**

   Sierra Home Architect warns you that the file might be large and take a long time to create. You also cannot cancel the save process; you must wait until it is finished. If you want to proceed, click Yes.

   When the file is complete, Sierra Home Architect prompts you to assign the file a name and directory path. The file is saved in .avi format, and can be opened and played outside Sierra Home Architect in a Windows video program.

8. **Click Close to exit the Recorder Options window.**

   You can now play back the animated Walkthrough in Sierra Home Architect whenever the saved design file is open.

To play back a Walkthrough:

1. On the Features menu, point to Recorder Control, then select Walkthrough.
2. Click the Walkthroughs tab and then select the Walkthrough you want to view from the list.
3. Click Play to view the selected Walkthrough.
4. While the Walkthrough is playing, you can click Pause to pause the playback.

   If you click Pause, you can click Resume to continue.
5. Click Close to exit from the Recorder Options window.

To delete a Walkthrough:

1. In the Recorder Options window, select the Walkthrough you want to delete.
2. Click the Delete button.

Taking Snapshots

A snapshot is a recorded image of a favorite 3D view in your home design. Snapshots are a good way to save a list of sites in your design for quick review.

To record a snapshot:

1. On the Features menu, point to Recorder Control, then select Snapshot.

   The Recorder Options window appears.
2. Move the camera or use the 3D view controls to show the area you want to record in the snapshot.
3. Click the Take Snapshot button to store the snapshot.
4. Type the name for your snapshot in the Name Of Snapshot field.

   If you don't want to name the snapshot, you can use the generic name Sierra Home Architect assigns automatically.
5. Click Close to exit the Recorder Options window.

To view a snapshot:

1. On the Features menu, point to Recorder Control, then select Snapshot.
2. Select the snapshot you want to view from the list.
3. Click the Go To View button to view the selected snapshot.
4. Click Close to exit the Recorder Options window.

To delete a snapshot:

1. In the Recorder Options window, select the snapshot you want to delete.
2. Click the Delete button.

High Resolution Rendering Using Raytracing

Graphics created using this feature are similar to the snapshot feature mentioned above, though they are much higher quality. Additionally, snapshots have some bookmark-like qualities that these graphics do not. Use snapshots when you want just a quick reference picture or when you want to be able to return to the same vantage point repeatedly. Use high resolution rendering any time you want a high-quality image for your own use or to share with others. You can make a drawing of the current view, or of a previously saved snapshot.

To make a High Resolution 3D Photo:

1. On the Features menu, point to Render, then select Render This View.

   The Render 3D View dialog box appears.
2. Select the Date and Time you want the image to resemble.

   Sierra Home Architect will adjust the lighting to match the time and date you specify.
3. Select a Camera Lights option from the pull down list.

   This option affects the apparent light used in the image. Each choice has a different effect on the contrast in the image and the appearance of highlights and shadows. Available Light uses only ambient light in the scene. Single Soft Fill adds a soft light near the camera. Single Hard Fill adds a bright light near the camera. Multi Soft Fill adds a soft light near the camera and another farther away. Multi Hard Fill adds a hard light near the camera and another farther away.
4. Select the Rendered Image Size that you want.

   Rendering can take a long time, especially for large images. Be prepared to go get a cup of coffee if you pick a large size image. If you choose the Custom option, you can specify your own image size in pixels. You can also do a quick, small render to make sure you like the camera angle.
5. Click the Start button to begin.

   After you click the Start button, you'll see the rendering start to occur in the window on the right.
6. While you wait, you can switch back to Sierra Home Architect and continue working.

   While it is being rendered you can minimize the window or switch to another program. The rendering will continue in the background. When it is complete, the window will open up again for you to see the results.

7. **Save the image by clicking the Save button.**

   The rendered image can be saved as a .BMP file. Most image editing programs allow you to edit and print .BMP files.

You can also make high resolution renderings of snapshots you have made.

To make a High Resolution 3D Photo of a snapshot:

1. **On the Features menu, point to Render, then click Render Recorded Snapshot.**

   The Render Recorded Snapshots dialog box appears.

2. **Click the Add button to add Snapshots to the list of Files To Render on the right.**
3. **Select each File on the right in turn to set the rendering details.**

   You will need to select the time and date to simulate in the image, and the Rendered Image Size. You can also change the file and path if you want.

4. **Click Start to begin.**

   Unlike rendering a single image, when rendering snapshots, you will not be able to switch to Sierra Home Architect and let the rendering occur in the background.

   Once the drawing is complete, you can view the files in any graphics program that can read .BMP files.

Using the Shopping List

Use the Shopping List to get a rough idea of how much your design might cost to build from scratch. The Shopping List also helps you keep track of selected design elements, as well as their quantities, unit prices, and subtotals.

To open the Shopping List:

1. **From the Features window select View Shopping List.**

   A file tree displays design elements broken down by category.

2. **Expand a category to see a breakdown of costs within the category.**

   Click a plus (+) sign to expand a category; click the minus (–) sign to hide details.

Adding Objects to the List

Most architectural elements you add to a design appear in the Shopping List. If you want more items to appear on the Shopping List, click the Edit menu, select Options, select the Program tab, and then select Show All On Shopping List.

Modifying Prices

To modify the price of a particular object, double-click the object listing to see its Spec Sheet. You can click the Price tab and revise the price or select a price range of low, medium, or high. Note that not all objects have prices.

Adjusting Column Widths

The Shopping List has columns for an object's name, size, quantity, unit price, subtotal, and notes. To increase or decrease the width of any column, move the mouse over the side of a column heading until the cursor changes to a double arrow. You can then drag the double arrow to the left or right to resize the column.

Exporting a Shopping List

If you want to crunch the numbers for the estimated costs of your design, you can export the Shopping List to a text file. You can then import this file into a spreadsheet application such as Microsoft Excel. You can also look at the list with a text editor such as Microsoft Notepad.

To export the Shopping List:

1. Click the Export button in the Shopping List window.
2. In the window that appears, enter a name for the shopping list in the File Name field.
3. Click Save to export the Shopping List to a file of its own.
4. Open the Shopping List file in another program such as Excel or Notepad.

Printing a Shopping List

To print a Shopping List:

1. From the File menu, select Print Setup, and change your orientation to Landscape. Click OK to save your changes.
2. From the Features menu, select View Shopping List. Click the Print button.
3. In the resulting window, select the columns you want to see displayed in your printout.
4. If you have several identical items listed, you can combine items by selecting the Merge Similar Items box.
5. Choose between large, medium, and small font sizes.
6. Click OK to print.

Designing Exteriors

Use the Exterior Inspector to set the styles for your home's exterior and choose a background scene. You can assign materials to the doors, windows, exterior walls, and trim.

To add exterior materials and a background to your design:

1. **From the Features menu, select Exterior Inspector.**

   The Exterior Inspector window opens. The Materials section displays panels for each material assigned to different parts of the exterior. For example, the doors and window frames might have wooden exteriors.

2. **To change a material, click a panel.**

   The Material Picker window opens.

3. **Use the following options in the Material Picker window to find the exterior style you** want:

   - To view different exterior material types, expand the tree on the left side of the window.
   - Once you select the category you want, scroll through the displayed panels to look at your choices.
   - Place the pointer on a material to see a quick description of it.

4. **When you find a material you want, click its panel and click OK.**

   The Material Picker window closes. The style you chose appears in the Materials area of the Exterior Inspector.

5. **To choose a different exterior background, click the Change Location button.**

   Your choices in the next window include sunsets, beaches, and deserts. To insert your own bitmap image, click Choose My Own and select a .bmp file from your hard drive. For more details on importing your own background images, see the next section.

   When you finish, click OK to return to the Exterior Inspector window.

6. **To choose a ground cover for the exterior, click the Ground Cover button and choose from the available panels.**

   Your options are similar to those in step 3. For more details on choosing ground covers, see the next sections.

7. **Click OK to close the Exterior Inspector and return to the work area.**

Importing Your Own Background Image

You can prepare background images for exterior designs in the graphics program of your choice. Use the following guidelines to create the image:

- Correct for accidental tilting and aspect ratio, and adjust brightness and contrast as needed.
- Size your image to a height of less than 480 pixels. Images with greater heights will appear centered in Sierra Home Architect, with the top and bottom truncated. The image can have any width, including panoramic dimensions of more than 1,000 pixels.
- When you finish, save the background image as a Windows Bitmap file (.bmp). Sierra Home Architect can import 256-color (8-bit) and 16 million-color (24-bit) .bmp files.

Making Exterior Walkways and Driveways

By default, Sierra Home Architect applies your ground cover across the entire window, but you can create areas on the ground such as sidewalks and driveways.

To design exterior walkways and driveways:

1. Select the Layout toolbar and then the Basics button.
2. From the Flooring category, choose Hardscape.
3. Choose patio, driveway, sidewalk, or plant bed, and drag into the 2D View window.
4. Stretch the floor to the length and width you want.
5. Edit the materials by double-clicking the item and selecting new materials from the item's Spec Sheet.

Hide/Show Options on the Title Bar

Use the Hide/Show button on the Title bar to control what you see on the screen. Click this button to display a menu of the elements you can hide or display. Selecting any of these elements hides them from view. To bring them back into view, select them again. Hiding some of these features may improve rendering speed in 3D View. See the next section for other ways to improve performance.

Improving Performance

Hardware Acceleration

If your graphics adapter has hardware acceleration, Sierra Home Architect can use it to speed up the display, especially for high resolution rendering.

To take advantage of hardware acceleration, click the Edit menu, choose Options, click the 3D tab, and select Use 3D Hardware Acceleration. To turn off acceleration, clear the option. You must always restart the program after changing this option.

The default setting for this option is off. If your hardware does not support acceleration, or if the 3D view does not display properly, you should turn this option off.

Improving 3D View Speed

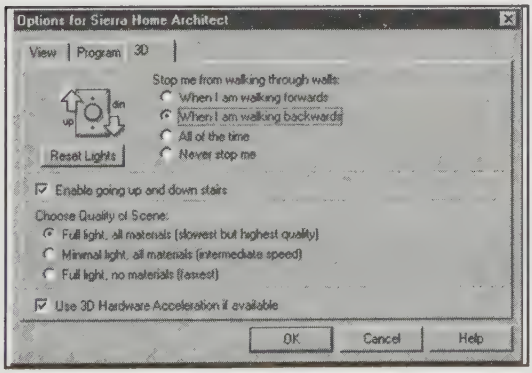
Rendering refers to the way Sierra Home Architect creates a three-dimensional effect on a 2D screen.

Rendering requires a tradeoff between viewing quality and the speed with which Sierra Home Architect creates the 3D image. As you increase the rendering speed, you sacrifice 3D image quality. As you increase image quality, Sierra Home Architect takes longer to render your 3D scene.

During the basic design phase of your home, you may want to increase the rendering speed at the expense of image quality. You can then navigate through the 3D View more quickly, since Sierra Home Architect will require less time to generate the 3D scene. Later, when you want to see all the materials and colors you've assigned, you can switch back to a better image quality and longer rendering time.

To change the lighting and rendering speed in the 3D View:

1. **From the Edit menu, select Options, then click the 3D tab to see the following options.**



Options dialog box, 3D tab

2. **To adjust the lighting, use the Reset Lights controls.**

   Click the Up arrow to brighten the 3D View. Click the Dim arrow to make the view darker. These controls may help you see more details and colors in your design.

3. **To change the drawing method, click one of the following Quality of Scene options:**

   - Full light, all materials. Select this setting to see the highest-quality image, but at the slowest drawing speed. Use this setting to see all the styles and materials you've assigned to the finished design.
   - Minimal light, all materials. This intermediate setting is a compromise between drawing speed and image quality.
   - Full light, no materials. Select this setting to increase Sierra Home Architect's drawing speed but decrease 3D image quality. This is the best setting for the basic design phase of your home.

Seeing Through Walls

At times you may want to get a full view of your room, but cannot do so because when you step back for a better view, you leave the room and find yourself looking straight at a wall.

Try moving a wall away. Select the wall, preferably one with nothing attached to it, and drag it to an area outside the floor plan. The wall will retain its properties. Now you can view your room as if it were a stage, and get a better look at the space. When you finish, drag the wall back into place.

Seeing Through Doors and into Rooms

If you want to see into rooms when you walk through your design in 3D View, you can make the doors invisible.

To make a door invisible:

1. **Double-click a door to see its Spec Sheet.**
2. **Select the Details tab.**
3. **Select the Invisible option in the Show Door frame.**
4. **Click OK to close the Spec Sheet.**

   This action replaces your door with an empty doorway. Now you can roam through your design in 3D View and see all the rooms. To return to the original door style, repeat steps 1-3 and select the Show Door Closed option.

Solving Memory Problems

Because of Sierra Home Architect's drawing capabilities and other advanced features, the program might require more memory than some computers can provide. If your processor runs short of memory, you may notice these symptoms:

- Parts of Sierra Home Architect do not start or display.
- The display shows an inappropriate color scheme.
- Printouts appear as if created on a typewriter.
- Sierra Home Architect stops responding to keyboard or mouse commands.

If you encounter such difficulties, try the following techniques to help you overcome memory shortfalls:

- Close other applications while running Sierra Home Architect. Note that some programs may start automatically when you start Windows. You'll find these program icons in your Windows Startup group or on your task bar.
- Reboot your computer.
- Increase the amount of random access memory (RAM) in your system.

Creating Custom Cabinetry

No kitchen is complete without cabinets. This section gives you several options for creating unique cabinets quickly and effectively in Sierra Home Architect.

Creating Duplicate Cabinets

In most kitchens, all the cabinets have the same dimensions and design. To create this uniform effect in your model kitchen, create one cabinet in the 2D View and then copy as many cabinets as you need. In this way, all your cabinets can have the same height, style, and materials.

To create duplicate cabinets:

1. Click the Kitchen button on the Decorate toolbar, then click the Cabinets button. Drag the cabinet you want into the 2D View.
2. With the cabinet selected, choose Copy from the Edit menu.
3. Open the Edit menu again and choose Paste.

   A duplicate of the first cabinet appears.
4. Repeat steps 2 and 3 to create as many cabinets as you need.
5. To modify any of the copied cabinets, double-click the cabinet and modify its Spec Sheet settings.

Matched kitchen cabinets

Extending Wall Cabinets to the Ceiling

Kitchen cabinets often extend to the ceiling. The following steps show you how to achieve the effect in Sierra Home Architect.

To create kitchen cabinets that extend to the ceiling:

1. Click the Kitchen button on the Decorate toolbar and then click the Cabinets button. Drag the cabinet you want into the 2D View.
2. Double-click the cabinet to open its Spec Sheet, select the Details tab, and change the height to 42 inches.

   The 42-inch height assumes the ceiling has a standard height of 96 inches.
3. If necessary, use the Spec Sheet to assign the cabinet different materials and styles.
4. Click OK to exit the Spec Sheet and return to the 2D View.
5. Drag the wall cabinet until it "snaps" to a kitchen wall.
6. View the kitchen wall in 3D.

Creating Stacked Wall Cabinets

Top and bottom layers of wall cabinets that extend to the kitchen ceiling can create a fashionable look and a practical storage solution. The following procedure assumes that the ceiling has a standard height of 96 inches.

To create stacked wall cabinets:

1. Click the Kitchen button on the Decorate toolbar and then click the Cabinets button.
2. Drag an upper cabinet you like into the 2D View.
3. Double-click the cabinet in 2D View to open its Spec Sheet.
4. In the Spec Sheet, change the Height to 21 inches and the Above Floor value to 54 inches, then click OK.
5. Create duplicates of the cabinet until you have a row.

   If necessary, use the steps in the preceding section to create duplicate cabinets. The first row you create is the bottom row of cabinets.
6. To begin building the top row of cabinets, hold down SHIFT and select each of the bottom cabinets.
7. Use the Copy and Paste commands in the Edit menu to create a duplicate row of cabinets.
8. To position the duplicate row above the bottom row, double-click the copied cabinets to open their Spec Sheets.

9. In the Spec Sheet, keep the height of the cabinets at 21 inches but make their Above Floor value 75 inches. Click OK to return to the 2D View.
10. Move the copied and resized cabinets so they are directly on top of the lower wall cabinets.

Creating an Exposed Beam Ceiling

Exposed beams are a wonderful detail. You can easily add these beams in Sierra Home Architect, but you should make them the last step in your design. If you add beams too early in the design process, the beams will obscure objects below and make them more difficult to select.

To create exposed beams for a ceiling:

1. Select the Layout tab, click the Shapes button, and then select Rectangular Shapes.
2. Drag a horizontal beam into the 2D View. You may need to move the camera into the room, and angle it up to see the beam in the 3D view.
3. Position the beam and stretch it to the length you want.
4. Double-click the beam to open its Spec Sheet. Set the beam's Above Floor value.

   The default height is 7 feet 6 inches to the bottom of the beam. The beam depth is 6 inches. Together, these figures total 96 inches, which is the standard ceiling height. If your ceiling height is different, or you want a thicker or thinner beam, you need to adjust these figures accordingly.
5. In the Spec Sheet, assign the beam an appropriate material and click OK.
6. Make a copy of the beam.

   With the beam selected, choose Copy from the Edit menu. Next, choose Paste from the Edit menu. Another beam appears with the same attributes as the first.
7. Copy and paste more beams until you have enough to span the room.
8. Drag the beams to space them properly and achieve the look you want.

Creating Vaulted Ceilings

You can create the look of vaulted ceilings within your design by completing the following steps.

To create a vaulted ceiling effect:

1. Display the Layout toolbar.
2. Double-click the room in 2D View.

   The room Spec Sheet appears.
3. On the Room Spec Sheet, clear the Make Ceiling Visible check box to hide the ceiling and click OK.

4. **Add the roof.**

   For more information on adding roofs see Chapter 14.

5. **Select the roof in 2D View and click the Edit Item button.**
6. **Change the material for the underside of the roof to achieve the desired texture and look for your ceiling.**
7. **Click OK to save your changes.**

Creating Soffits

Generally speaking, soffits are used to fill the edges between the wall and ceiling. In kitchens, they are often used to fill in the gap between the top of the wall cabinets and the ceiling. Soffits can also "step" up a ceiling for dramatic effects, or you can place them over a sink area or window to highlight that area of a room.

You can create soffits easily in Sierra Home Architect, but you should make them the last step in your room design. Adding soffits early in the design process will obscure objects below and make them more difficult to select.

To create and position a soffit:

1. **Select the Layout tab, click the Shapes button, and then select Rectangular Shapes.**
2. **Drag a horizontal beam into the 2D View.**
3. **Position the beam near the wall where you want the soffit, and stretch the beam to be the same length as the wall.**
4. **Double-click the beam to open its Spec Sheet and assign it an appropriate material, height, and depth. Click OK when you finish to return to the 2D View.**

   Do not give the beam an above floor value. You'll take care of this setting in the next steps.

5. **In 2D View, position the beam against the wall.**
6. **In the beam Spec Sheet, enter the Above Floor height that will position the beam just below the ceiling.**

   This should be the height of the ceiling minus the width of the beam. So if the ceiling is the standard 96 inches high, and the beam is 8 inches wide, then the Above Floor height should be 7 feet 4 inches.

7. **Create a duplicate of the soffit.**

   Select the soffit and then select Copy from the Edit menu. Next, choose Paste from the Edit menu.

8. **Use the spin handle to rotate the copied soffit 90 degrees and position it against a second wall in your room.**

   Use the commands listed in steps 5 and 6 to position the soffit.

9. Stretch the copied soffit as needed so its length matches that of the wall.
10. Repeat steps 7 through 9 until all the walls in the room have soffits.

Creating a Raised Area in a Room

Raise the floor of an eating nook or other section of your home to set it apart from the rest of the room.

To create a raised area in a room:

1. Select the Layout tab, click the Shapes button, and then select Rectangular to view the rectangular shapes menu.
2. Drag a cube into the room where you want the raised area.
3. In the 2D View, stretch the cube to the width and depth you want for the raised area.
4. Double-click the cube to open its Spec Sheet and assign the following properties:
   - **Height:** If you choose a height greater than 9 inches, you will need to add steps, as detailed in the next step.
   - **Material:** Choose a flooring material for the cube.

   When you finish, click OK. Examine the raised area in the 3D View.
5. If necessary, create steps leading up to the raised area.

   To create steps, repeat steps 1 through 3 with a second cube. Assign this cube a lower height and stretch it to an appropriate width and depth (10 to 12 inches) for the step.

   Create as many steps as needed, all with varying heights. Make sure, however, that the height difference is consistent (e.g., steps with heights of 6, 12, 18, and 24 inches).
6. To position furniture in the raised area, consider the increased height requirements.

   Major furnishings will not drop directly to the surface of a raised area. To make furnishings rest on the raised area, assign Above Floor values that match the height of the raised area. Double-click each furnishing to open its Spec Sheet. The Above Floor field is located on the Details tab.

   Likewise, any object you place above the floor in the raised area must have an Above Floor value of the height of the floor plus its own height above the floor. For example, a cabinet might have an Above Floor value of 56 inches, but the same cabinet within a raised area might need an Above Floor value of 65 inches (56 inches plus 9 inches for the raised area).

Creating a Kitchen Island

Many modern homes have kitchen islands, which increase counter space and create a dynamic look. Sierra Home Architect contains a few stock islands, which are available in the Decorate toolbar under Kitchen, Cabinets, Islands. If you don't find an island you like, you can create one of your own.

To create a kitchen island:

1. Click the Kitchen button on the Decorate toolbar and then click the Cabinets menu.
2. Drag the cabinet you want into the middle of the kitchen.
3. Add as many cabinets as you want to create the island.
4. To increase the width of your island, you have two options:
   - Double-click the cabinets to enter their Spec Sheets and increase the depth of the cabinets to more than 24 inches. If you increase the depth to more than 30 inches, the cabinet space could become inaccessible.
   - Create another row of cabinets that stands back-to-back with the first row. Experiment with the depths of both rows until you are happy with the counter space.
5. If you want, you can refine the island design by stretching cabinets and adding diagonal and corner units from the Decorate toolbar.

   You can develop some interesting formations by experimenting. Remember to leave at least 42 inches for circulation between the island and other work areas.

Creating an Island with Multiple Levels

If you want a kitchen island to have multiple levels, create an island as described in the previous section. Double-click each cabinet to enter the Spec Sheets and assign varying heights.

Creating Counter Seating for the Island

Many kitchen islands have an extension for counter seating. To create this effect, follow these steps.

1. Create the kitchen island.
2. Double-click each cabinet to open its Spec Sheet, and then clear the Include Counter check box.
3. Click the Search button on the Design toolbar, enter wall shelf in the Type of Item field, and click Search Now.
4. Select the wall shelf and click Done.
5. Drag the shelf into the 2D View, then position and stretch it so the shelf overhangs the cabinets by at least 9 inches on the side you want.

Menu Reference

Use this section for a quick explanation of Sierra Home Architect menu options.

The previous chapters of this guide explain how and when to use particular menu options in Sierra Home Architect. Use this section for a quick description of any menu option.

The menu options are at the top of the Sierra Home Architect window. The program contains the following menus:

- **File menu.** Use this menu to control the design files you create in Sierra Home Architect. You can also use these options to print designs, e-mail them, and export them as bitmap graphics or DXF format files.
- **Edit menu.** Use these options to select, copy, delete, and lock objects. You also can control the display, sounds, and other features by selecting Options on this menu.
- **Features menu.** These menu options let you connect to the Internet, modify your exterior, view your shopping list, and record Walkthroughs and snapshots.
- **Help menu.** The online Help is an alternative to using the manual.

Click a menu to see its options. You can also open a menu by holding down the Alt key and pressing the key that matches the underlined letter in the menu name. For example, you can open the File menu by pressing Alt and F.

File Menu

New	Opens the Welcome screen in Sierra Home Architect, where you can create a new design.
Open	Opens an existing file in Sierra Home Architect.
Open Designer Rooms Library	Opens one of the sample floor plans or style samples of professionally decorated rooms provided by Sierra Home Architect.
Save	Saves your current open file.
Save As	Lets you change the name of an existing file.
Save As Sample	Enables you to save a design you have created as a sample, or template, for future designs. You can open designs you have saved this way by selecting Open Designer Rooms Library from the File menu, and looking in the My Samples folder in the Designer Rooms Library window.
Mail this Design	Enables you to e-mail your design using Microsoft Exchange. If you do not have an e-mail package, you should not use this command. It may crash your system.

File Menu – continued

Export	Saves your design as a bitmap image (bmp) or AutoCAD format (dxf).
Print 2D	Prints your 2D View design. For details on printing, see Sharing Your Design in Chapter 13.
Print 2D Preview	Displays a window that lets you preview what the printed 2-dimensional floor plan will look like.
Print 3D	Prints your 3D View design. For details on printing, see Sharing Your Design in Chapter 13.
Print 3D Preview	Displays a window that lets you preview the printed 3-dimensional design.
Print Setup	Use Print Setup to specify a printer, paper orientation, and type of paper used. Click the Options or Properties button to select advanced printing settings. Press F1 in Print Setup for online Help.
Exit	Exits from Sierra Home Architect.

Edit Menu

Undo	Cancels your last action.
Cut	Removes the selected item from your design and puts it on the clipboard. You can then paste the item elsewhere. This command is unavailable if no item is selected. Cutting items to the clipboard replaces the contents previously stored there.
Copy	Copies the selected item onto the clipboard. You can then paste the item elsewhere. This command is unavailable if no item is selected. Copying an item to the clipboard replaces the contents previously stored there.
Paste	Inserts a copy of the clipboard contents into your design. This command is unavailable if the clipboard is empty.
Delete	Deletes the selected object in 2D View.
Delete All	Deletes all objects in 2D View.
Select All	Selects all objects in 2D View.
Select None	Deselects all currently selected objects in 2D View.
Lock The Size And Location Of This Object	Locks a selected object in place to prevent it from being moved accidentally. When the selected object is locked, this menu option changes to Unlock Selected. If you select this option again, the object becomes unlocked.
Add To Favorites	Adds a selected object to the Favorites folder.
Group Objects	Enables you to move and work with a group of objects as one object.

Edit Menu – continued

Add Group Items To Shopping List	When objects are grouped by the Group Objects command, this menu option adds that group to the Shopping List.
Ungroup Objects	Enables you to move and rearrange the objects of a suite of furniture separately.
Options	For a list of these options, see the next section.

Options Dialog Box on Edit Menu

View tab

Display Wall Measurements	When this check box is selected, wall measurements appear in 2D View.
Display Room Labels	When selected, displays the names of each room in your design. Deselect this feature to turn the labels off.
Display Metric Units	Enables you to switch between displaying dimensions in standard units or metric units. You can switch between units at any time.
Display Ruler	When this check box is selected, the ruler appears on the top and to the left of 2D View.
Make Hip Roofs Transparent	Temporarily hides the roof so you can see the rest of your design. We recommend that you hide the roof if you're not working on it.
Enforce Minimum And Maximum Sizes	When this check box is selected, you can adjust the size of objects only to a point. Clear this check box if you want to make an object larger or smaller than the recommended size range.
Display Grid	Displays a grid in 2D View to help you align objects.
Set The 2D Grid Spacing	If you display a grid in 2D View, you can vary the grid spacing by entering the spacing in inches in this box.
General Snap	When this check box is selected, objects such as doors, windows, cabinets, and wall art snap into place against walls. Deselect the option to turn this feature off.
Wall Snap	When this check box is selected, walls snap to each other when they are within the distance from each other specified in the Wall-To-Wall Snap box.
Wall-To-Wall Snap	Enables you to set the distance required between two walls to make them snap together.

Options Dialog Box on Edit Menu – continued

Program tab

Show All on Shopping List	By default, most architectural elements are shown with their prices on the Shopping List. Check this feature to see all items in your design on the Shopping List.
Auto Save Info Every: ...Minutes	Clearing or selecting the check box turns Auto Save off or on. You can adjust the Auto Save interval by entering the interval in the Minutes box.
Program Sounds	When this check box is selected, all sounds play in Sierra Home Architect. When cleared, sounds are turned off.
Walkthrough Sound	Lets you specify the sound you hear as you navigate the 3D View. By default, you hear footsteps.
Audition	Clicking this button plays a sample of the sound selected in the Walkthrough Sound list.

3D tab

Reset Lights	Enables you to dim or brighten the lighting in the 3D View. Click the Up arrow to brighten the lighting; click the Dim arrow to reduce lighting. Click the Reset Lights button to set the lighting to the default.
Stop Me From Walking Through Walls	These options enable you to control the movement of the camera in 3D View. Select the option for how you want Sierra Home Architect to control the camera.
Enable Going Up And Down Stairs	When this check box is selected, a dialog box appears as you approach a flight of stairs in your design that confirms whether you want to go up or down the stairs or whether you want to remain on the same floor. Clear this check box if you want to turn off the feature.
Choose Quality Of Scene	These options enable you to choose a higher quality scene at the expense of drawing speed or vice versa. A higher quality scene enables you to see colors better, but slows down rendering time.
Use 3D Hardware Acceleration If Available	If your computer system has 3D hardware acceleration, select this check box to improve 3D movement and rendering speed. Check your system's documentation to determine whether 3D hardware acceleration is available.

Features Menu

Add Your Own Objects	Displays the Custom Objects dialog box, which you use to create a new object from a bitmap file.
Add Your Own Materials	Displays the Custom Materials dialog box, which you use to add a new material created in a graphics application.
Material Painter	Displays the Material Painter dialog box, which you use to change the colors of existing materials.

Features Menu – continued

Exterior Inspector	Opens the Exterior Inspector, which you use to design your home's exterior. For details, see Chapter 14.
Render	Using this option, you can record a Walkthrough of your design, take quality photos of individual scenes, or connect to another computer to take someone else on a virtual tour.
Recorder Control	Opens the Recorder Control window. From this window you can record a Walkthrough, take a snapshot, or share your design (via Internet Protocol). For more information, see Recording Walkthroughs and Snapshots in Chapter 14. For more information about Virtual Tours, see Sharing Your Design over the Internet in Chapter 13.
Sierra Web Sites	Enables you to connect with Sierra On-Line web site, where you can go for product support, home design tips, and more. The submenu also contains links to online shopping sites for furniture and building materials to help you find what you're looking for and estimate pricing.
Design Guide	An on-line help system for planning designs, remodeling, and redecorating.
View Shopping List	Opens the Shopping List, a feature that keeps track of your selected objects, as well as their quantities, installed prices, unit prices, and subtotals. For details on the Shopping List, see Chapter 14.
2D Plan Tracer	Enables you to import a scanned blueprint or hand-drawn design and build your design over the imported image.

Help Menu

Contents	Opens the online Help Table of Contents, Index, and full-text Find feature.
Tips & Tricks	Opens the online Help to the Tips and Tricks topic. From this topic you can jump to specific topics or open the help Table of Contents.
Using Help	If you are unfamiliar with online Help for Windows applications, selecting this option will display an introduction.
Tutorial	Opens the Sierra Home Architect Tutorial.
Credits	Opens the online Help to the Credits topic.
About	Displays copyright and licensing information for Sierra Home Architect.

Use the glossary for quick explanations of important terms in LandDesigner 3D and Home Architect.

Camera
The camera controls your view in 3D. The camera tool is the red icon that appears in Top View. Point the camera toward an area you want to see in 3D View.

Decorate Toolbar
The Decorate toolbar is located within the Design toolbar and is identified by the Decorate tab. Use this toolbar to access furnishings for your design, such as sofas and chairs.

Design Toolbar
The Design toolbar in Home Architect incorporates the Layout and Decorate toolbars and other elements such as Favorites, Search, and the 2D/3D View button.

Designer
The main screen you use to complete your landscape design in LandDesigner 3D. The Designer has a Top View, which is an aerial floor plan you use to add plants and other objects, and a 3D View, which provides a realistic view of your design.

Dragging
Dragging refers to holding down the left mouse button while moving the pointer across the screen.

Hardscape
Refers to objects in your yard such as fences or railings.

Layout Toolbar
In Home Architect, the Layout toolbar is located on the Design toolbar and is identified by the Layout tab. Use this toolbar to access components for your floor plan, such as rooms and doors.

Masking
Getting rid of the background surrounding your object by covering it up or erasing it completely using masking tools.

Object toolbar
Located at the bottom of the screen, the Object toolbar displays objects in Top View and navigational tools in 3D View.

Panels
Panels are the squares shown in the Materials section of object Spec Sheets. Panels show a small picture of the material assigned to an object. Hold your mouse over a panel to see a short description of the material. Plants do not have materials in their Spec Sheets.

Rendering
Rendering refers to the way a three-dimensional effect is created on a 2D screen.

Rotating
Most objects and some plants have a spin handle. To rotate an object in Top View, click its spin handle and drag it in the direction you want it to rotate.

Search
The Search windows give you access to LandDesigner and Home Architect databases. Use this feature to locate plants and other objects or to replace generic "placeholder" plants.

Shopping List
A feature that keeps track of selected design elements, as well as their quantities, installed prices, unit prices, notes, and subtotals.

Snap
In Home Architect, some objects "snap" automatically into place against walls as you drag or reposition them, including doors, windows, and cabinets. Walls snap together, too.

Spec Sheets
Spec Sheets are windows for editing properties of a selected plant, room, or other object, including its size, assigned materials, color, style, and price. Double-click any object to see its Spec Sheet.

Stretching
Stretching refers to the resizing of an object. Click an object once to select it in 2D View. The black boxes that appear around the object are called stretch handles. Drag a handle to resize the object. To stretch an object proportionately, hold down SHIFT while you drag a stretch handle.

3D View
3D View is a realistic representation of your design. The red camera in the Top View controls what you see in 3D. You can navigate the 3D View using the mouse, the arrow keys on your keyboard, or the navigational arrows at the bottom of the screen.

Title Bar
The Title bar is a narrow strip between the Design toolbar and the windows that contain the 2D View and 3D View. On this bar are buttons that help you control what you see in the 2D View and the 3D View.

Top (2D) View
The window is where you add, arrange, and revise plants, rooms, walls, furnishings, and other objects. The Top View displays your design from an aerial perspective.

Walkthrough
Walkthrough refers to the navigational features of the 3D View that let you take a virtual "walk" through your design.

Wizard
A series of windows that helps you build a component of your design. For example, LandDesigner 3D includes wizards to help you design lots, houses, and slopes.

18 Using Photo Garden Designer

and Photo Home Interiors

The following chapter explains how to use Photo Garden Designer and Photo Home Interiors. The screens and procedures for the two programs are virtually identical, but the content is different. You can use the following instructions with either program. Chapter text will refer to both Photo Garden Designer and Photo Home Interiors as "the Photo program."

About Photo Garden Designer and Photo Home Interiors

Photo Garden Designer is a photo-based alternative to LandDesigner 3D, and Photo Home Interiors is a photo-based alternative to Sierra Home Architect 3D. To quickly create a landscape design based on a photograph of your yard, use Photo Garden Designer. To quickly create an interior design based on a photograph of a room in your home, use Photo Home Interiors.

The Photo program works and looks best if your display settings are 800 x 600 or higher with at least 16-bit color. The creators of the Photo program do not recommend running at lower resolutions and color depths.

See the Introduction section of this manual for help installing and uninstalling the Photo program.

Getting Started

There are three stages to the process of creating a design with the Photo program. You do not have to follow this process exactly, but it will give you an idea of where to start.

You begin with a background image of the area you want to design. This is like a canvas onto which you will add objects to create your design. If you don't have an image yet, you can start with one of the sample backgrounds that comes with the Photo program. You can also import the background image using a scanner or from an image file on your computer.

Next, add objects to the design from the Object Toolbar at the top of the design window. Drag and drop these objects onto your design where you would like them to be.

Finally, change the objects you have created by moving them, resizing them, rotating them, changing their color or contrast, and so on.

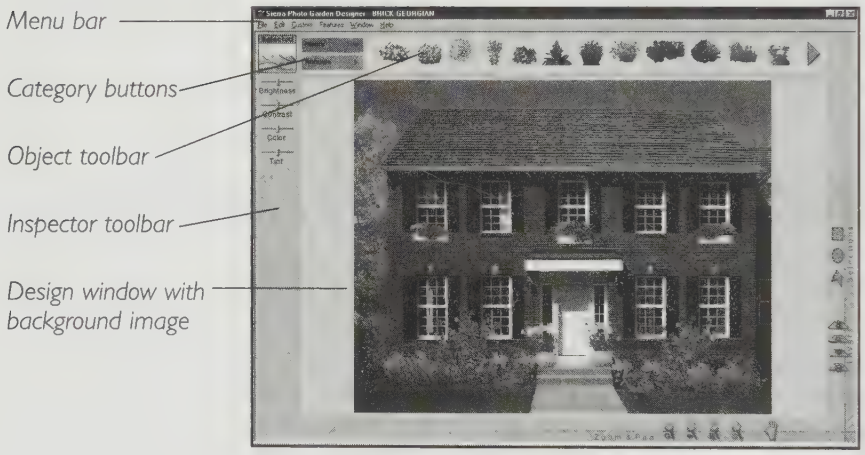
Getting your design just right will probably take you several rounds of edits, adding and removing objects, and trying different colors and textures. Remember to save your work regularly. If you make a change and decide you do not like it, you can easily return to the previously saved design.

When you start the Photo program or start a new file, you'll have the following options:

- **Start a New Design with a Photo on Disk.** Use your own image as a background to start a new design, or use one of the sample backgrounds that comes with the Photo program.
- **Start a New Design by Scanning in a Photo.** Bring an image directly into the program from an attached scanner.
- **Open a Sample Design.** Open one of the several sample designs included on the CD. Use these to get ideas for your own yard and to help learn the capabilities of the Photo program.
- **Open a Saved Design.** Select this option to access previously saved designs.
- **Instructional Videos.** Watch one of several videos introducing you to the features and uses of the Photo program.

Navigating the Photo Program

The main window of the Photo program is shown below. It appears when you select a background image or a saved file with which to work.



Main window of the Photo program

- **Menu bar.** The menu bar contains commands for accessing the many features of the Photo program.
- **Category buttons** (pull downs). Click the top button to display the basic groups of available objects. Once you select the basic group, click the second button (when available) to select the most specific category.
- **Object toolbar.** Select objects from the Object toolbar, and then drag them into your design.

- **Inspector toolbar**. Contains controls to manipulate the plants, objects, textures and background in your design.
- **Design window.** This is your primary workspace.

Modifying Your View

In your current design, you can change your view using the Zoom & Pan tools. Most of the same controls are also available from the Window menu. Using these tools changes your view, but not the design itself.

Zoom & Pan tools

- **Zoom In.** To magnify your view of the entire design, click the Zoom In tool.
- **Zoom Out.** Click the Zoom Out button to back up from a magnified view.
- **Zoom to Fit.** Click the Zoom to Fit button to make your background fit the Design window
- **Zoom to Area.** To see a particular area of the design in more detail, click Zoom to Area tool, and then drag within the Design window to define the area you want to see more closely. The area is magnified when you release the mouse.
- **Pan.** To view different areas of your design, select the Pan tool, click in the Design window and drag until the desired view appears.

The Window menu also has these additional options for modifying your view:

- To hide the background image temporarily, select Hide Background from the Window menu. Use this option to focus on objects you've added to the design or if you have a hard time finding objects against the background. To display the background again, select Hide Background Image from the Window menu again.
- To hide objects in your design temporarily and focus on the background, select Hide Foreground from the Window menu. Repeat this step to display furniture and other objects again. This tool can give you a "before-and-after" view of the design.

Background Images

The background image is the starting point of your design. By overlaying other images on top of the background you can modify your design. Before you can start a new design, you must choose a background. You have two options:

- To use a scanner connected to your computer, choose Start a New Design by Scanning in a Photo from the startup screen.
- To use a picture stored on the computer or one of the sample backgrounds, choose "Start a New Design with a Photo on Disk" from the startup screen and select the background image.

Using Your Own Background

For best effect, background images should be 16-bit color or higher and sized between 640 x 480 pixels and 1024 x 768 pixels (200KB or less). Background images may be any size, but larger images can slow down the computer and smaller images do not look as good when you print or zoom in on them. The Photo program can use files in the following formats: Windows Bitmap (.BMP), JPEG (.JPG, .JPEG), TIFF (.TIF, .TIFF), Targa (.TGA), Macintosh PICT (.PCT, .PIC), Photo CD (.PCD), and PNG (.PNG).

Start a New Design by Scanning in a Photo

If you have a scanner connected to your computer, you can access it and scan a photo directly into the Photo program. Follow these steps:

1. **Choose Start a New Design by Scanning in a Photo from the startup screen.**

   If you've already been working in the Photo program and wish to start a new design, choose New from the File menu; there is no need to restart the application.
2. **In the window that appears, click the name of your scanner from the Sources list and then click Scan.**
3. **Your scanner interface appears. Use it as you normally do to scan the photograph.**

   See the guidelines under Using Your Own Background for information on what size and resolution are best suited to the Photo program.
4. **Before making changes to your imported image, save it using the Save command from the File menu. This way you can reuse this "blank canvas" in the future.**

Note: You must have a scanner hooked up to your computer and ready to use before this feature will work. If you do not have a scanner hooked up, this option is not available.

Adding to Your Design

Once you have a background image selected, you can begin adding objects, defining areas you wish to add textures to, and otherwise modifying your design.

Adding Objects

To add an object to your design:

1. **Click the top category button and make a selection from the list of basic groups.**
2. **Once you have selected the basic group, click the second category button to select a more specific group.**

   Occasionally, a basic group contains no categories. In these cases, there isn't a second level button.

3. **From the Object toolbar, drag specific objects onto the background. To see the name of an object, hold your mouse pointer over it. A short name or definition appears.**

   For details on manipulating objects, see Refining Your Design. If you can't find something you like, see Working with Custom Objects later in this chapter for directions on adding your own images.

   If you want to lock an object into place, choose Lock/Unlock from the Edit menu and select Lock Location from the resulting menu. If you change your mind and later wish to move the item, select the item and choose Unlock Location from the same menu. Size and rotation can also be locked and unlocked the same way.

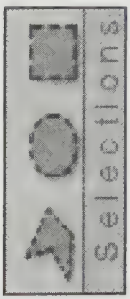
Adding Textured Regions

The Photo program comes with many textures to help create the look of stone, brick, and other surfaces.

Adding a textured region to your design is significantly different from adding other objects.

To add a textured region:

1. **Define the area in the Design window where you want to add the textured region. You have three options:**
   - To define a rectangular region, click the Rectangle selection tool then click and drag in the Design window.
   - To define an oval region, click the Oval selection tool, then click and drag in the Design window.



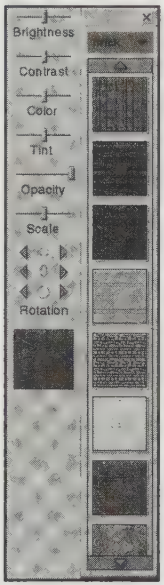
- To create a custom region, click the Polygon selection tool, and then click in the Design window to begin the shape. Move your mouse to define a side of the shape, then click to set the next point. Each move and click adds a new point. To complete the shape, click the enlarged dot that marks the beginning of the shape.

Note: Custom regions must have at least three points.

2. **Click the Fill with Texture option, located on popup menu.**

   After you complete the selection, a popup menu appears. Select the Fill with Texture option. The other options on the popup menu are Copy from Background, Create Masked Object, and Create Tiled Texture. See Working with Custom Objects and Creating Custom Textures later in this chapter for information on these options.

3. **When the texture picker appears, click the category button and select the type of texture for the region.**



4. **Click the swatch for the texture you want to use and the area will automatically fill with that texture.**

   To see the name of any texture, hold your mouse pointer over the swatch you are curious about and a small window will pop up.

   Using the navigation arrows, browse through the available choices. If you can't find something you like, see Creating Custom Textures for instructions on bringing your own textures into the Photo program.

Refining Your Design

Selecting an Object

To select an object or area, move your mouse over the top of the item. When the cursor changes to a select cursor, click to select the object. When selected, objects appear in the small window at the top of the Inspector toolbar and the settings below change to reflect that specific object.

To select multiple objects, hold down the Shift or Ctrl key as you click each of the multiple objects. The adjustments available when you have multiple objects selected include cutting, copying, deleting, and changing layer order.

You can also select objects by clicking "Select Next" under the Edit menu or by using the Tab key. Each time you choose this the next object will be selected. If you want to select multiple objects, hold the Shift key down while you use this command. Each object will be added to the group of selected objects.

When you have several objects overlapped, it can be difficult to select exactly what you want. When you position the mouse over overlapped objects, the cursor changes to say "Other". When the cursor says "Other", you can right click and select the object you want from a list of objects.

Deleting Objects

You can delete any placed object by selecting it and pressing the Delete key or selecting Delete from the Edit menu.

To delete an object temporarily, select Cut from the Edit menu. To replace the object, select Paste from the Edit menu. Both commands can also be accessed from the menu that appears when you right click on an object.

Undoing Changes

If you make a mistake, undo the previous action by selecting Undo from the Edit menu. Back up several steps by selecting the Undo command repeatedly.

Choose Redo from the Edit menu if you undo something and then decide it was better before it was undone. Redo can also be used to repeat a series of commands that have been undone.

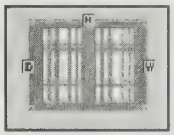
Moving Objects

To move an object or region, click to select it and hold down the mouse button to drag it to a new location. If multiple objects are selected, they will all move. For instructions on selecting multiple objects, see Selecting an Object.

To lock an object into place, select that object and choose Lock/Unlock from the Edit menu, and then select Lock Location from the resulting menu. If you change your mind and later wish to move the item, select the item and choose Unlock Location from the same menu. Size and rotation can also be locked and unlocked the same way.

Resizing Objects

Available methods for resizing objects vary with the type of object. Different object types are resized differently.



Decals are 2D objects that you add to your design. 3D models are 3D objects; they are distinguished from decals by the "H", "W", and "D" handles that appear when you select them in your design. Textured regions are described above in the section titled Adding Textured Regions.

If the object is small, you may want to zoom in before you attempt to click and drag the resize handles.

Resizing decal objects:

1. **To resize an object, click to select it.**

   Square "handles" appear around your selection.
2. **To resize proportionately, click and drag one of the corner handles until it looks right in your design.**
3. **To resize in one direction only, click one of the middle handles.**

Resizing 3D models in the design:

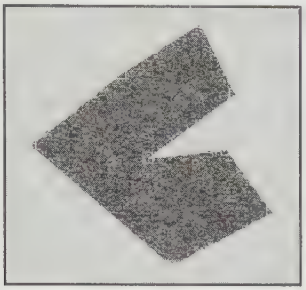
1. **Click the 3D object to select it.**

   Square "handles" appear on the corners of your selection and "H", "W", and "D" handles appear on the sides. The letters stand for Height, Width and Depth.
2. **To make the object bigger or smaller, click and drag one of the corner handles until the 3D model looks right in your design.**
3. **To resize in only one direction, click the letter handle that corresponds with the dimension you want to change and drag until you achieve the desired results. If you want to resize in two dimensions but not the third, you must resize one at a time.**

Resizing textured regions:

1. **Click the textured region to select it.**

   Square "handles" appear around the region.



2. **To resize a rectangular region proportionately, click and drag a corner handle.**

   To resize a rectangular region in one direction, use the side handles.

3. **To resize a custom region, click and drag any of the handles.**
4. **To change the size of a texture without changing the size of the actual region, drag the button on the Scale slider on the Inspector toolbar to the left or right until it looks right. (Not all regions have Scale slider controls.)**

Once you have something at a size you like, you can choose Lock/Unlock from the Edit menu and select Lock Size from the resulting menu. If you change your mind, select the item and choose Unlock Size from the same menu. Location and rotation can also be locked and unlocked the same way.

Copying Objects

Once an object is in your design, you can duplicate it instead of dragging it from the Object toolbar repeatedly. This is especially helpful if you have made changes to the object.

To duplicate a selected object within the same design, select Clone from the Edit menu or right click on the desired object and choose Clone. A copy appears next to the original.

The Copy and Paste options perform the same function. Select the object, select Copy from the Edit menu and then select Paste from the Edit menu.

Layering Objects

The Photo program lets you stack objects to create a layered effect in your design. Layering helps your design appear more realistic and improves the sense of perspective. If you accidentally place one object on top of another, you can also use the layering tools to display the covered object again.

Every time you add a new object, it becomes the top layer. To set it so that editing objects brings them to the top layer, select Options from the Edit menu and select Bring Selected Objects to the Front.

To refine the layering in your design, use the tools shown below. Or, from the Edit menu, click Layer, and then choose a layering option.

Layering tools

Top Make the selected item the top item in the design.

Up Use this tool to make selected item(s) one step closer to the front of the design.

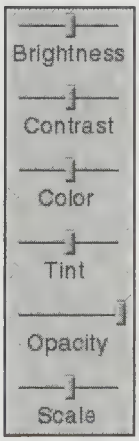
Down Use this tool to move selected item(s) one step closer to the back of the design.

Bottom Make the selected item the bottom layer in the design.

Note: You can also create a copy of part of the background image and move it up or down in the layering order. For details, see Copying Images From the Background later in this chapter.

Adjusting Color Attributes

You can adjust the coloration of objects using the brightness, contrast, tint, and color controls in the Inspector toolbar. 3D models have only brightness and contrast controls available.



To adjust color attributes:

1. **Click to select the object you wish to adjust.**
   When multiple objects are selected, the adjustment controls become unavailable.
2. **Use the sliding controls on the Inspector toolbar to achieve the desired effect.**
   Click the button on the slider bar and drag it either left or right to see the changes.

Note: You can use the same adjustments to change the background image. Click on an area of the design window that has no objects to select the background and then make your changes.

Customizing Color Attributes for Textured Regions

In addition to the color attributes mentioned above, textured regions also have adjustments for opacity and scale.

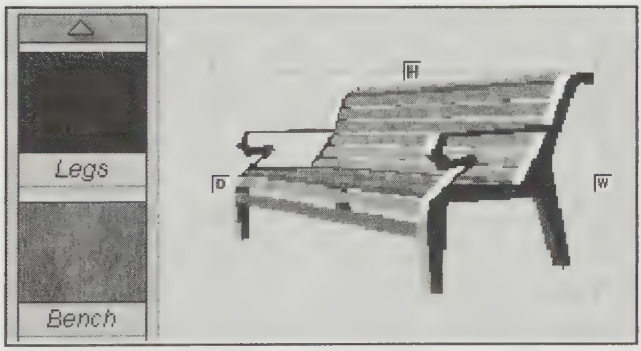
Adjusting the Opacity control causes a region to appear more or less transparent. Changing the opacity can be useful when you're trying to recolor an area without losing the detail, like when you want to see what the front door would look like in dark oak. It can also be helpful to temporarily adjust the opacity of a region while you're resizing it to assure you're covering only what you want to cover.

The Scale control does not change the size of the region at all; it only makes the texture filling the region larger or smaller. Changing the scale is very useful when you want to make things appear like they are further back in the image.

As with the other color attributes, select the area(s) you wish to change and adjust the sliders until the effect suits you.

Modifying the Appearance of 3D Models

Most 3D model objects can be customized with the colors and textures of your choosing. When you click on a model object, any sections that can be changed show up as color swatches in the Inspector toolbar. In the following example, the legs and bench can be modified.



3D object with customizable areas

To change an area of the model:

1. **Select any 3D object you wish to modify.**

   Before they can be changed, 3D objects must be placed in the Design window.

2. **In the Inspector toolbar, click on the swatch panel for the area you wish to change.**

3. **When the texture picker appears, click the category button at the top of the window and select a texture type to view.**
4. **Click the swatch for the texture you want to use.**

   Use the navigation arrows to browse through the available choices. If you can't find something you like, see Creating Custom Textures later in this chapter for instructions on bringing your own textures into the Photo program.

Changing the Orientation of Objects

All three kinds of objects—3D models, decals, and textured regions—can be rotated in some fashion.

The rotation of 3D models and decals can be locked to prevent accidental changes. Once the object is positioned as you like, you can choose Lock/Unlock from the Edit menu and select Lock Rotation from the resulting menu. If you change your mind, select the item and choose Unlock Rotation from the same menu. Size and Location can be locked and unlocked the same way.

When rotating objects, decals or textures, each time you click the rotation arrows, the object is rotated five degrees. To rotate an object in one-degree increments, hold down the Shift key while you click the rotation arrows.

Rotating decals. Select the object and use the top two sets of arrows to skew the object left/right or top/bottom. The bottom set of arrows rotates the object in the same manner as the hands on a clock face.

Rotating 3D models. To rotate a 3D model, first select the item and then click the arrow that corresponds to the direction you want the item to rotate. Click repeatedly (or click and hold) on the rotation arrows until the object's orientation suits you.

Click the Flip button to flip the object along its vertical axis. If the selected object is vertically symmetrical, you might not see any change. You can "unflip" an object by selecting it and clicking the flip tool again.

Rotating textures in textured regions. Textured regions will not rotate, but you can rotate the orientation of the fill in the region, which is helpful for approximating perspective.

To rotate the texture within a textured region, simply select the region and use the rotation arrows until you achieve the desired effect. The top two sets of arrows will "skew" the texture and the bottom set rotates it in the same manner as the hands on a clock face.

Working with Custom Objects

The Photo program works best when you use your own photographs as backgrounds. You can further customize your design by photographing furniture, plants, landscape objects, and textures, but the background image is the linchpin of your custom design. This section provides guidelines on what sort of artwork gives the best results, as well as instructions on how to use the various custom image tools.

Image Requirements

Overcast conditions produce the best results when taking outdoor photographs to use in the Photo program. Contrast in the photograph is minimized; no area will be excessively dark or bright.

Indoor background images should also have even contrast so that overlaid objects will appear more realistic. Try taking the picture at night or on an overcast day.

The Photo program can use files in the following formats: Windows Bitmap (.BMP), JPEG (.JPG, .JPEG), TIFF (.TIF, .TIFF), Targa (.TGA), Macintosh PICT (.PCT, .PIC), Photo CD (.PCD), and PNG (.PNG).

Copying Images From the Background

In addition to the images available in the Object toolbar, you can create images by copying sections of the background. You can then layer this copied image with others in your design to create a more realistic effect.

You can also use this option to "erase" items from your background. To do this, copy an area of the background that can be used to replace the area you want to erase. Unlock the copied area and move it over the part of the design you want to cover up. See Creating Custom Textures for other ways to achieve the same effect.

To create an image from a section of the background image:

1. **Define the area of the background to duplicate.**

   Click the Rectangle, Oval or Polygon selection tool, then define the area you wish to copy. If you need help using these tools, see Adding Textured Regions earlier in this chapter.

2. **Select the Copy from Background command.**

   After you create the image, you can change its layer so that it appears to be on top of other objects. By placing objects "deeper" into the design, you create a more realistic appearance. For more details, see Layering Objects earlier in this chapter.

   Objects copied from the background can be modified in all the same ways as other objects, including adjusting color attributes.

3. **To move it from the original location, select the area, right-click and choose Unlock Object, and then drag the selection to its new location.**

   Both locking and unlocking commands can also be accessed from the Edit menu.

Importing Image Files

Use the Import Custom object command to import your own images for use as objects in the Photo program.

To import a custom image:

1. **Select Import Custom Object from the Custom menu.**
2. **Locate and select the file you want to import, and then click Open.**

   The Mask Editor opens. See Using the Mask Editor for further instructions.

Creating Masked Images from the Background

There may be something in your background that you would like to use as an object, perhaps adding multiple copies of it to the design. Use the Create Masked Object command to create custom objects from design backgrounds.

For example, assume your background image contains a dormer. You would like to add another dormer to the house in a different location, or perhaps to a different background altogether. To add the dormer, you must turn the original image of the dormer into a new object—this is called creating a masked image. Once it is a new object, you can add it to any design.

To create a masked image from the background:

1. **Use a selection tool to outline the general area of the item you want to mask.**

   Either select the general area with the Rectangle selection tool, or use the Polygon selection tool to trace the outline of the object. This will save you time later in the Mask Editor.
2. **Click Create Masked Object to open the Mask Editor.**

   See Using the Mask Editor for further instructions.

Note: Using the Oval or Polygon selection tool to select the image to mask will cause parts of the image to already be masked (blue) when your selection appears in the Mask Editor.

Using the Mask Editor

The Mask Editor is used to "erase" the areas of the selection that are not part of your object. When these are erased, all that will be left is the object. You can then place new copies of the object in your designs.

In the Mask Editor, you will erase the unwanted background by painting it solid blue (RGB value of 0, 0, 255). Those areas of your photo will then be invisible.

Use the selection tools to mask out the larger areas of your image and use the paint brush and eraser tools to edit smaller, more precise areas of your image.

To select a rectangular or oval area:
Click on the Rectangle or Oval selection tool in the margin. Click and drag on the area you wish to cover. To undo your selection, click the Undo button or click anywhere in the image.

To select a custom-shaped area:
Click on the Polygon selection tool and then click on the points of the area you wish to mask. Complete your selection by clicking on the start point. To undo your selection, click the Undo button or click anywhere in the image.

To fill a selected area:
Select an area to be filled using one of the selection tools. After you complete the selection, a menu opens. Click on the paint bucket icon and the selected area will be filled.

To erase a filled area:
Click on the eraser icon and then click in the filled area to be erased.

To fill a more precise area:

1. **Click on the paint brush icon and then select one of the brush widths that appear at the bottom of the Mask Editor.**
2. **Click and drag over the pixel areas you wish to mask.**

To erase a precise area:

1. **Click on the eraser icon and then select one of the eraser widths that appear below in the options window.**
2. **Click and drag over the pixel areas you wish to erase.**

To view different areas of your image:

1. **Click on the Zoom In, Zoom Out and Zoom to Fit tools to increase and decrease your image size.**

   Zoom In is especially useful when painting or erasing small areas.
2. **Use the Pan Image tool by clicking on the hand icon and then clicking and dragging in the image to move to a different area of your image.**

To save your masked image:
Enter a name for your image in the text box at the top of the screen and click Done.

The custom object appears on the Object toolbar under "Custom." Holding the mouse pointer over the object in the object bar shows the object name.

Creating Custom Textures

A texture is an image that approximates a surface in the physical world. You can use textures to create the look of a patio, stone path, dirt road, or just about anything else. The texture repeats, or tiles, to fill the space you define.

Importing Custom Textures

In the Custom menu, the Import Custom Texture command allows you to import your own textures. Custom textures can be used in any textured region or for customizing 3D models.

A custom texture will look best if the file is 128 x 128 pixels before you import it. Other sizes will work, but may look distorted on 3D models. Square images always make the best custom textures.

To import a custom texture:

1. **Select Import Custom Texture from the Custom menu.**
2. **Select the file you want to import, and then click Open.**
3. **In the Custom Texture dialog box, enter an appropriate name for the new texture.**
4. **The new custom texture appears in the Custom category on the texture picker.**

   Hold your mouse pointer over the panel in the texture picker to show the name you chose.

Create a Tiled Texture from the Background

You can use tiled textures to fill any region you define using the selection tools. The texture repeats, or tiles, as needed to fill the region. You can import custom textures as described earlier to import textures from other files, or you can use something from the background as a tiled texture.

To create a tiled texture from the background:

1 **Use the rectangle selection tool to define the area to use as a tiled texture.**

   Circular and custom regions cannot be made into textures. See the previous section, Importing Custom Textures, for information on what sizes work best.

2. **Click the Create Tiled Texture button.**
3. **In the Custom Texture dialog box, type a name for the texture.**

   The resulting texture can be found under the Custom category in the texture picker and can be used to fill any textured region (see Adding Textured Regions).

Saving and Printing Your Design

The options in this section allow you to keep designs you are pleased with and share them with friends or contractors.

Saving the Design

To save your design:

1. Select Save from the File menu.
2. In the Save As dialog box, type a name for your design in the File Name field.
3. Optionally, select another drive or folder.
4. Click Save to save the design file.

Note: If you try to exit the Photo program without saving your work, you are prompted to save the design first.

Exporting a Design as a Bitmap

To export your design:

1. Select Export as Image from the File menu.
2. In the Save As dialog box, type a name for the file in the File Name field.
3. Optionally, select another drive or folder.
4. Select a file format and color depth for the exported file.

   The Photo program can export files in the following formats: Windows Bitmap (.BMP), JPEG (.JPG, .JPEG), TIFF (.TIF, .TIFF), Targa (.TGA), Macintosh PICT (.PCT, .PIC), and PNG (.PNG). Various formats have different options for color depth. Higher bit depths result in larger files but higher image quality. Files of lower bit depths are smaller, but of lesser quality
5. Click Save to save the file.

Printing the Design

To print your design:

1. Open the design to print.
2. If you want to print a "before" view of the background, select Hide Foreground from the Window menu.
3. Select Print Setup from the File menu to change your printer options, paper orientation, and/or the size you want the printout to be.

   Print size. Your options for printout size are 100%, 75%, 50%, and 25% of the page. The location of the image on the page changes depending on the selected orientation.

   The quality of your printout is directly related to the resolution of the background. The higher the resolution, the better the image will appear on your printout, especially at larger sizes. If you find that your design does not look very good at 100% of page size, try printing at a smaller percentage to improve quality.

   Orientation. Landscape is the default orientation; choose this orientation if the picture is wider than it is tall. If your picture is taller than it is wide, click the Portrait option.
4. Choose Print Preview from the File menu to see what your printout will look like before you print it.

   To change any of the settings, click the Close button and revise the settings under Print Setup.
5. Select Print from the File menu.

   The print dialog box appears.
6. When you have set all the options, click OK.

19 Using 3D Deck

About 3D Deck

Use 3D Deck to design and visualize your dream deck. The program lets you:

- Design and build single and multi-level decks.
- Place furniture, plants, and other objects on your deck.
- Create openings for hot tubs and landscaping.
- Add stairs, railings, and walls, and experiment with different styles.
- View your design in 3D from any angle.
- Compute building costs, track materials, and use the How-To Guide for advice and construction techniques.

Installation

See the Introduction section of this manual for instructions on installing and uninstalling 3D Deck. If you do not change the destination path during installation, the program is installed in the C:\SIERRA\3D Deck folder.

Deck Designer Tutorial

The following tutorial takes you through the basic steps to design a deck, refine your design, and print a materials list and deck plan. To learn more about advanced features, such as creating multi-level decks or adding openings to your deck, see the Deck Designer section of the on-line help.

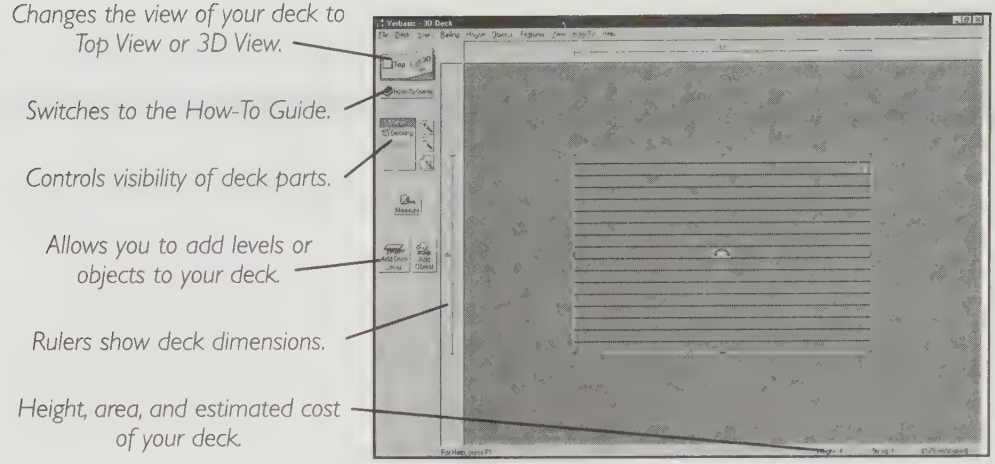
To use the Deck Designer tutorial:

1. **Start 3D Deck and click on the Power Saw icon.**

   This opens the Deck Designer.

   The first time you start 3D Deck, the Deck Shape Gallery appears so you can choose an initial shape. Whenever you open the program later, 3D Deck displays the most recently saved deck.

   For this tutorial, choose the Simple Platform deck in the upper left corner of the Deck Shape Gallery and click OK. A free-standing deck appears.



Deck Designer

Click and drag the deck's handles to change its length and width. To move the deck, click anywhere within its borders and drag it to a new location.

2. **Add a notch to the deck.**

   Choose Notch Corner from the Deck menu. A dialog opens in which you can choose which corner to notch.

   For this tutorial, click on the lower left question mark to place the notch in the lower left corner. Click OK.

   After you have added the notch, you can drag the handles in the notch to change the shape of the deck. For example, dragging the notch inward creates an L-shaped deck.

3. **Angle a corner.**

   Choose Angle Corner from the Deck menu. For this tutorial, click on the lower right question mark to angle the lower right corner. Click OK. You can change the position of the angled corner by dragging its handles.

4. **Add stairs to the deck.**

   Choose Add Stairs from the Stairs menu. For this tutorial, choose the question mark in the middle of the angled corner. Click OK, and use your mouse to position the stairs exactly where you want them.

   You can move the stairs from side to side by dragging them with your mouse, or change the length or width of the stairs by dragging the stairs' handles.

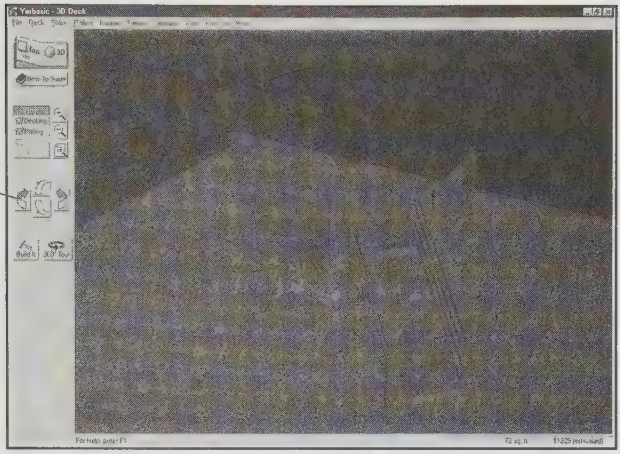
   Double-click on the stairs to display the Stair Editor window, where you can type the exact height or width of the stairs, and view and print plans for building the stairs.

5. **Add railings and view your deck in 3D View.**

   Choose Add Railings from the Railing menu. Click on Select All, and then click OK. For a better view of the railings, click on the 3D View button.

   You must be in Top View to edit most features of your deck; however, you can edit railing styles in either Top View or 3D View.

Use the arrow keys to reposition your deck in 3D View.



Adding railings in 3D Deck

To modify the railing style, choose Change Railing Style from the Railing menu.

6. **Add a wall and a door.**

   Go back to Top View and choose Add Wall from the House menu. Click on the question mark on the top side of the deck and click OK.

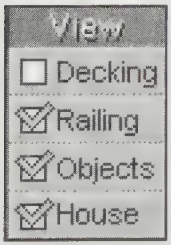
   Next, add a door by choosing Doors from the House menu. Click on the question mark on the top side and click OK. Choose a door style and click OK. Notice that you must first add a wall before you can add floors, windows, or lights.

   Use the mouse to drag the door to a different position. Double-click on the door to display a window where you can change the door's dimensions. View your work in 3D.

7. **Refine your deck structure with the Deck Editor.**

   Click on the Top View button. Double-click on the deck to display the Deck Editor and set the height of your deck.

   You can also use the Deck Editor to vary the type and size of the wood for the decking, frame, and railing, and to optimize the design for cost and lumber conservation. Changing the dimensions of decking, joists, and beam lumber may change the framing of your design. You can click the Decking box in the View Selector to remove the check mark and see the changes.



8. **Place an object on the deck.**

   In Top View, choose Furniture from the Objects menu. Select Plastic Patio Table with Umbrella, and click OK. Place the object by clicking your deck where you want it. To change an object's height or width, double-click on it and enter the new dimensions.

9. **Revise prices and print the materials list.**

   Choose Material Lists from the Features menu. The resulting window displays a Shopping List of materials you can use when building your deck. The Shopping List includes an estimate of the total cost. To adjust the cost of individual items in the list:

   - Click on an item on the list, click on the Price button, enter a new price, and click OK.
   - Click on OK to leave the Material Lists window, and choose either Set Lumber Prices or Set Hardware Prices from the Features menu.

Note: You can also view the Beam Cut List and the Joist Cut List from the Materials List window. If you click the Print button, all three lists print.

10. **Print a plan for the deck.**

    To print the top view of the structure, first click on the Top View button. Click Show Decking under the View menu to remove the check mark, and choose Print from the File menu to open the Print dialog.

    To print the 3D side view of the structure, first click on the 3D View button. Choose Front under the View menu, and then choose Print from the File menu. Combined with the materials list, you now have a complete plan to purchase materials and build your deck.

11. **Save your deck design.**

    From the File menu, select Save As. Select a directory for your deck design. Sierra recommends saving to the Sierra\3DDeck folder. Optionally, type a new name for the deck design, and then click Save.

Export Your Deck

You might want to incorporate a deck you've created in 3D Deck into your home or landscape design.

To export a deck from 3D Deck:

1. **In 3D Deck, save a current version of the file that you wish to export.**

   Sierra recommends saving to the Sierra\3Ddeck folder.

2. **Select File/Export Deck Design.**
3. **Enter a name for the file in the Deck Name Field.**
4. **Click OK to export the file.**
5. **Exit the deck design window, and then close the deck program. Then, remove LandDesigner CD 2 and insert CD1.**

To view an imported deck in LandDesigner 3D:

1. Open LandDesigner 3D, and then open the design file to which you want to add a deck.
2. Select the Design tab. Using the Categories buttons at the bottom of the screen, select House, and then select Decks.
3. Move your mouse cursor over the thumbnail images to find the deck labeled "Imported Deck."

   The deck thumbnail image is of a generic rectangular deck, with a small disk icon above it. When dropped into place the deck will have the design you gave it in 3D Deck.
4. Drag the deck onto your design in Top View. Or, click the icon and then click on your layout.
5. Select the name of the deck to import and click OK.

   The deck will be placed into the LandDesigner 3D design. You can move and rotate the deck, but you cannot modify the deck's materials and style. To change the deck you must return to 3D Deck, edit it, and then export it again.

To import a deck into Sierra Home Architect:

1. Open Sierra Home Architect and open your design file.
2. Click the Layout tab and select the Basics button. Click the Deck button and select Deck from the Menu that appears. A deck icon will appear in the Object toolbar.
3. Drag the deck onto your design in 2D View.

   When you drop the deck, a list appears containing the decks you have exported from 3D Deck.
4. Select the name of the deck you want to import and click OK.

Using the How-To Guide

The How-To Guide provides advice on deck design and construction. It includes drawings, photos, and animations to demonstrate the concepts described in the text.

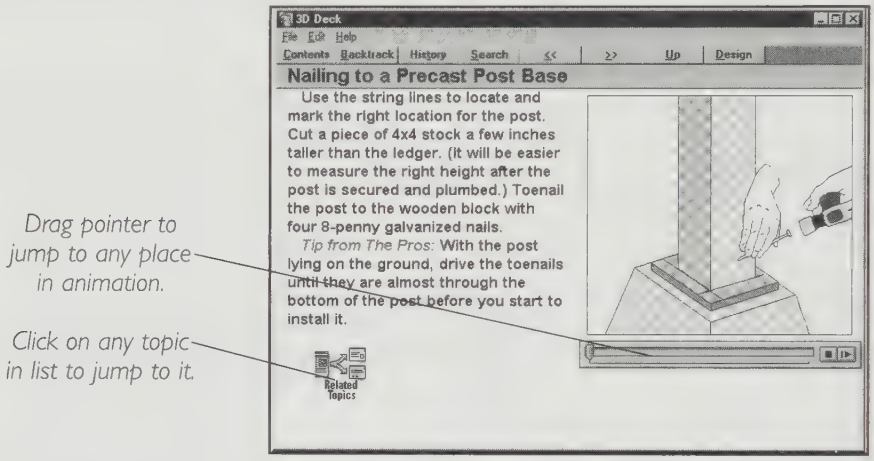
To View the How-To Guide:

Start 3D Deck, and then click the How-To Guide icon. Once in the Deck Designer, you can click the How-To Guide button or choose one of the options from the How-To menu.

Using the How-To Guide

- Click **Contents** to go to the main help screen of 3D Deck.
- Click **Backtrack** to return to the last screen you viewed.
- Click **History** to list the topics you've viewed recently and go back to one.
- Click **Search** to find a topic with a keyword you specify.
- Click **<<** or **>>** to go to the previous or next topic.
- Click Up to go to the next level in the help structure.
- Click Design to go to the Deck Designer.

Here's a sample topic in the How-To guide:



Sample Topic screen

Click the Play button again to pause an animation. Click the button to stop the animation.

Chapter menus have a film icon to indicate topics that have animation. Topic names with arrows have subtopics.

Contacting

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Sierra On-Line offers a 24-hour automated technical support line with recorded answers to the most frequently asked technical questions. To access this service, call (425) 644-4343, and follow the recorded instructions to find your specific topic and resolve the issue. If this fails to solve your problem, you may still write, or fax us with your questions, or contact us via our Web site.

Sierra On-Line
Technical Support
P.O. Box 85006
Bellevue, WA 98015-8506

Main: (425) 644-4343
Monday-Friday, 8:00 a.m.- 4:45 p.m. PST
Fax: (425) 644-7697
http://www.sierra.com
support@sierra.com
LandDesigner feedback:
LD_feedback@sierra.com

United Kingdom

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Havas Interactive
2 Beacontree Plaza,
Gillette Way,
Reading, Berkshire
RG2 0BS United Kingdom

Main: (0118) 920-9111
Monday-Friday, 9:00 a.m. - 5:00 p.m.
Fax: (0118) 987-5603
http://www.sierra-online.co.uk

France

Havas Interactive France
32, Av de l'Europe
Bât Energy 1 (2e étage)
78 140 VELIZY-Villacoublay
France

Téléphone: 01-30-67-90-50
Lundi au Jeudi de 10h à 19h
Vendredi de 10h à 18h
Fax: 01 30 67 90 65
http://www.sierra.fr

Germany

Havas Interactive
Robert-Bosch-Str. 32
D-63303 Dreieich
Deutschland

Tel: (0) 6103-99-40-40
Montag bis Freitag von 10 - 19Uhr
Fax: (0) 6103-99-40-35
Mailbox: (0) 6103-99-40-35
http://www.sierra.de

Spain

Havas Interactive
Nuestra Senora de Valverde
N° 23
28034 Madrid
Spain

Tech Support Teléfono: 91 735 34 37
Soporte técnico de lunes a viernes de 09:30 a 15:00 y de 16:00 a 18:30
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Lundi au Jeudi de 10h à 19h
Vendredi de 10h à 18h
Fax: 01-30-67-90-65

Germany

Havas Interactive
Robert-Bosch-Str. 32
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08-CEZ-758